The Gulf Journal of Oncology

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علمهم تناول الفاكهة كما تعلمهم القراءة

هل تعلم بأن تناول الخضار والفاكهة الطازجة يساعد على تقليل نسبة الإصابة السرطان؟
Dear Colleagues,

We are deeply saddened by the demise of H.E. Dr. Mohammed Abdo Yamani who passed away on November 8, 2010. He was the incumbent Chairman of the Gulf Federation for Cancer Control elected together with the GFCC Board last February 2009. It is a great loss to the GFCC and the federation will surely miss him. He was an advocate of cancer awareness and strongly believed in the federation’s purpose. He has supported the federation in many countless ways and encouraged action and participation in the pursuit of our mission.

A simple individual, Dr. Yamani is an intellectual and thinker in the Arab and Islamic world. He wrote 35 books covering cultural and religious topics. Some of his works have been published in English. He has many significant contributions and achievements in the social, cultural, media and even sports. Loved and respected by all, Dr. Yamani was a well-known philanthropist. He was the Vice-Chairman of Dallah Al-Baraka, one of the Kingdom’s leading companies. He was also chairman of 12 national and international companies and establishments which specialize in culture, publishing, health, education and investment. He was a member of the board of directors of at least 10 companies including banks. He was the founder of the Assembly of Holy Quran in Makkah. He won several honors including the King Abdul Aziz Sash as well as medals from the governments of Mauritania, Indonesia, Jordan, France, Spain, Qatar and the UAE. He was a former Minister of Information and Minister of Culture and Media in the Saudi government.

He was a great man and this editorial alone is not enough to describe his contributions to the Arab society. We at the GFCC will always remember him as we pay our last respects to our departed Chairman.

The 5th Gulf Federation for Cancer Control Conference on Colorectal Cancer will be held in Sharjah, UAE on May 5-7, 2011. This conference is organised by the Friends of Cancer Patients (UAE) under the patronage of H.H. Sheikha Jowaher Bint Mohammed Al Qassimi of the United Arab Emirates. The GFFCC Conference is a regular conference held every two years, the last one was held in Yemen in 2009 focusing on Head and Neck cancer, for the purpose of enhancing participation and collaboration among cancer professionals and organizations in the region.

The focus of the next conference is the prevention and management of Colorectal Cancer highlighting new researches and advances in this field. We have invited experts and international speakers to share their knowledge and expertise in their areas of expertise. We are inviting oncologists in the gulf region and the Arab world to participate and submit their abstracts in this conference. More information on this conference can be found online at http://www.gfoc2011.com.

Best regards,

Dr. Khaled A. Al Saleh

Editor-in-Chief
The Editorial Board GJO
Presents its Gratitude and Thanks to
KUWAIT FOUNDATION
FOR THE ADVANCEMENT OF SCIENCES
(KFAS)
for Supporting this Issue
# The Gulf Journal of Oncology

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Colorectal Cancer - Diagnostics, Treatment and Control

Supported by the World Health Organization and the GCC Council for Health Ministers, the Organizing Committee of the Conference is pleased to invite all researchers and those concerned with colorectal cancer to participate in the conference either through presentation of latest scientific developments and diagnostic / treatments methods, presentation of latest scientific statistics related to the spread in the Arab Gulf region and/or presentation of the latest scientific research in this field.
The Abstracts Review Committee is composed of the following:

1. Shaheena Dawood, MBBCh, FACP, MRCP (UK), MPH, CPH, Dubai Hospital, Dubai, UAE
2. Sanjay R Jain, MD, PhD, Tawam Hospital, Al Ain, UAE
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4. Maryam Aslani, MD, FRCP, FACRO, Gulf International Cancer Center, Abu Dhabi, UAE
5. Aref Chehal, MBCHB, MACP, Al Mafraq Hospital, Abu Dhabi, UAE

More information about the congress can be found at www.uaecancercongress.ae

The following are the abstracts submitted during the congress.

**Post Mastectomy Radiation In CA Breast: A Comparison Of Three Hypofractionated Protocols**

Abubaker Shahid, PINUM Cancer Hospital, Pakistan

**Abstract**

**Objectives**

To compare three hypofractionated protocols in postmastectomy carcinoma breast in terms of local control, toxicity & work load.

**Methods & Materials**

A total of three hundred patients suffering from ca breast stage T2-4, N any were randomized into three arms after mastectomy. All the patients were treated with four fields on Co60 i.e. two tangential portals for chest wall, one anterior supraclavicular & axillary field & a posterior axillary boost and were randomized into three arms i.e. 2700 CGy in 5 fractions (one week) arm A, 3500 CGy in 10 fractions (2 weeks) arm B and 4000 CGy in 15 fractions (3 weeks) arm C. Skin, cardiac, pulmonary and hematological toxicities & lymphedema were compared in addition to local control and work load.

**Results**

The locoregional relapses were 11%, 12% and 10% in arms A, B & C respectively. 26%, 24% & 28% patients developed metastatic disease and 17%, 18% & 20% died in the three arms. G3 & G4 skin toxicities were 37%, 28% & 14%. G2 and G3 lymphedema was 21%, 22% & 27%. Cardiac toxicity was 5%, 6% & 5% while pulmonary toxicity was 4%, 5% & 5% respectively. All the differences except skin toxicity were statistically insignificant. There were no cases of hematological depression or rib fractures.

**Conclusions**

All the three short protocols were equally effective in locoregional disease control and toxicity was also comparable. They were helpful in reducing the work load and can be safely recommended for routine clinical use.

**Chromo-endoscopy with Methylene Blue and the Risk of DNA cleavage**

Md. Ahsan Habib, Bangladesh.

**Abstract**

From long time, methylene blue (MB), a cationic dye, has been using as a pigment in chromo-endoscopy. Recently, we found that MB causes DNA cleavage. Regarding this, interaction studies of the MB with plasmid DNA have been carried out using UV-vis., fluorescence and circular dichroism (CD) spectroscopy. Gel electrophoresis has been used to detect DNA cleavage and cyclic voltammetry has been used...
for studies of electrochemical properties of MB. UV-vis. and fluorescence results indicate that MB does not interact strongly with DNA, but DNA cleavage has been found in gel electrophoresis when DNA has incubated with MB at physiological conditions (e.g., 37 °C, pH 7.4 (HEPES), 0.1 M NaCl) under room light. Moreover, CD results also indicated that no significant interaction was occurred between the DNA and MB, but a drastic change was found from positive ellipticity to negative ellipticity at approx. 260 nm during titration of DNA with MB solution. This drastic change also suggests the cleavage of DNA in the presence of MB. Cyclic voltammetry results of MB indicate that the dye molecules have both oxidizing as well as reducing abilities and voltamograms are found reversible. The redox nature of the MB suggests that the dye molecules could generate reactive oxygen species (ROS) like hydrogen peroxide ($H_2O_2$), and even anionic oxygen free radical ($O_2^-$) under the present experimental conditions, which are responsible for cleavage of DNA. A possible mechanism is suggested.

Keywords:
Chromo-endoscopy; methylene blue; plasmid DNA; CD spectra; gel electrophoresis; DNA cleavage

Surgical and Functional Outcome of Studer Ileal Neobladder
Ali Akbar Zehri, Aga Khan University, Pakistan

Abstract
Purpose:
To review our experience of orthotopic continent urinary diversion with ileal (studer) neobladder and to determine the long term outcome.

Materials & Methods:
Between 1998-2009, a total of 134 patients underwent radical cystectomy and urinary diversion. 96 with ileal conduit and 38 underwent neobladder formation. A pouchogram was performed routinely after 3-4 weeks of surgery. Peri-operative and late complications, functional outcome of neobladder, urinary continence, metabolic and upper urinary tract status and overall survival were evaluated in all patients.

Results:
A total of 29 patients (76%) were available for the final analysis. The mean age was 59 years (28-76) and there were 23 male and 6 female patients. Two patients received prior neoadjuvant chemotherapy. A cystoscopic (visual) assessment of tumor free status of urethra was done in 13 pts, while in 16 patients it was determined by frozen section histo-pathological examination. The mean duration of surgery was 520 min (390-680) and mean estimated blood loss was 1250 mls (750-4500). A mean of 2.3 PCV were transfused to patients. The peri-operative complication rate was 24 % with 4 patients had surgical site infection, 1 patient developed sepsis and 2 patients required placement of PCN due to uretero-ileal leak on pouchogram. 22 patients were fully continent at 3 months follow up with 7 patients complained of minimal stress/nocturnal incontinence. The continence rate was 93 % at one year follow up. The mean capacity of neobladder at 6 months was 385 mls (250-520) and mean post void residual volume 62 mls (0-200). Uroflowmetry showed a mean Qmax of 16 ml / sec. The late complication rate was 17% with 3 patients developed anastomotic stricture requiring BNI, one formed stone in neobladder and one patient developed incisional hernia. The oncological outcome showed that 2 pts developed local recurrence one requiring total penectomy with urethrectomy and other required conversion to ileal conduit. 4 patients developed distant metastasis. The upper tract evaluation showed only mild HN and HU in all patients with preserved renal function. The survival rate was 80 % at a mean follow up of 66.4 months (6-144).

Conclusion:
Our experience showed that Studer ileal neobladder is a safe and effective option for urinary diversion after radical cystectomy in selected patients with good oncological and functional outcomes.
Abstract

Objectives

To describe the safety and efficacy of the stereotactic body radiotherapy (SBRT) of liver tumors.

History

Invent of modern radiotherapy equipments and techniques have revolutionized the radiotherapy practice since last decade. Techniques like Intensity Modulated Radiotherapy (IMRT), Image guided radiotherapy ( IGRT), have facilitated the Radiation Oncologist to deliver high doses of radiation in fewer fractions to the tumor extracranially and this term refers to as “Stereotactic Body Radiotherapy (SBRT)”. It is defined as the delivery of high ablative doses of radiation to the tumor under stereotactic conditions with steep dose gradient with out harming the closely situated normal organ at risk in multiple fractions. A modern linear accelerators (Synergy-S, Elekta: Crawley UK) with micro multileaf collimators (micMLCs), cone beam CT and robotic couch has been commissioned in June- 2009 at our center.

Methods:

From 15.06.09 to 30.04.10, three patients of liver lesions were treated. Two were male and one was female patient. Mean age was 54.3 years (range: 35-65 years). Two patients were having single lesion, while one had multiple liver lesions. One patient was histological proven hepatocellular carcinoma; other two were secondary liver metastases from breast and pancreas respectively. 37.5 Gy in three fractions at 12.5 Gy/Fr was used on every other day. Patients were followed up at 6 weeks, 3 months and 6 months after SBRT to document the response in terms of local control and toxicity. Mean volume was 67.7 cc (range: 13.3-115.36 cc).Review of literature by using Pubmed, Medscape and Pubmed Central was carried out to establish the safety and efficacy of the stereotactic body radiotherapy (SBRT) in liver tumors. Search was based upon the following: dose schedules, safety and efficacy of the primary and metastatic liver tumors.

Results:

All three patients tolerated treatment very well with out any acute toxicity. Median follow up was 6 months. Hepatocellular carcinoma showed a remarkable regression( >50%) in tumor volume as well as significant reduction in alpha-fetoprotein from 9065 IU to 238 IU at 3 month post treatment. Patient with single metastasis from pancreas showed 50 % regression in volume and stable biochemical markers, while the patient with multiple liver metastases from breast has completed her treatment 2 months ago, She had CT liver just after 5 weeks of SBRT and it revealed stable disease with radiation effects. Review of literature supports that linear accelerator based SBRT in liver lesions with the size ≤ 8 cm, local controls of about 66%-86% at 24 months and overall survival of 30%-62% at 24 months can be achieved. Number of lesions may range from 1-5. Dose-volume effect was observed in several studies. Higher doses like 20 Gy x 3 fractions were found safe. Adapted fractionation with lower doses for large tumors were found adequate. Residual normal liver volume of >700cc was found to be adequate to regain the normal functions of liver, that volume should receive <15 Gy in total 3 fraction schedule. Approximately same tolerances of other critical organs were observed with out severe toxicities.

Conclusion:

This preliminary data reveal no acute toxicity of linear accelerator based stereotactic body radiotherapy (SBRT) of liver lesions and it may have high rates of local tumor control as given in
literature and can be offered in these patients as a non invasive treatment option.

**Key words:**

Stereotatic Body Radiotherapy (SBRT), Stereotatic Body Radiosurgery (SBRS), Image guided radiotherapy (IGRT), Intensity modulated radiotherapy (IMRT), Liver metastases, Liver tumors.

**Helicobacter Pylori Strain Genotyping based on the Amplification and Sequencing of cagA Gene**

Garcia Daniella, Delgado Maria del Pilar, Quiroga Andres, Bravo Maria Mercedes, Jaramillo Carlos

Participants: Garcia Daniella¹, Delgado Maria del Pilar¹, Quiroga Andres², Bravo Maria Mercedes², Jaramillo Carlos¹, Laboratorio de Diagnostico Molecular y Bioinformatica, Universidad de los Andes, Bogota, D.C Laboratorio de Biologia del Cancer, Instituto Nacional de Cancerologia, Bogota, D.C.

**Abstract**

Relevance: H. pylori presence has been described as a high risk factor of suffering gastric cancer, which is the fourth most common cancer in Colombia. Some studies (Aras et al, 2003; Panayotopoulou et al, 2007) point out that when a genotypic characterization of different strains of this microorganism is carried out, more than one genotype can be found.

**Purpose:**

To characterize different H.pylori cagA genotypes that occur in the same patient sample (biopsy) applying molecular and bioinformatic techniques.

**Methods:**

cagA positive strains (n=35) from Instituto Nacional de Cancerologia (Bogota-Colombia), bank’s samples were included as study material. Tissue DNA was extracted and used to amplify the region of the cagA gene by PCR (Yamaoka et al., 1999). The NTC11637 H. pylori strain was included as a positive control. PCR products were visualized in 2% agarose gels and the amplified fragments were purified using a commercial kit. As a final stage, a precipitation based on ethanol and EDTA was done and reaction products were sequenced. The obtained sequences were edited and submitted to a bioinformatic analysis using AASA, a program designed to characterize the EPIYA phosphorylation motifs localized in the C-terminal of the CagA protein by Rothstain, Yanez and Vivas (Los Andes University Thesis, 2008).

**Results:**

The molecular and bioinformatic approach described allowed strain characterization. The applied strategy leads to verify the presence of the A, B and C EPIYA motifs in different combinations. ABC group was the most frequent motif found (48%). These results match those of previous reports in Colombia, nevertheless it is important to remark that amplicons with different molecular sizes can have the same EPIYA motif and that amplicons with similar sizes can have different EPIYA motifs.

**Conclusions:**

The current strategy demonstrated to be useful in the identification and posterior characterization of more than one genotype of the different H. pylori strains present in the same biopsy sample. This molecular and bioinformatics approach combined with other techniques seems to be a good alternative to establish if an infection by H. pylori is the result of a coinfection or a microevolution process.

**NOEY2 Gene Expression in Breast Tumor Pathogenesis**

Dmytro Mykytenko, Greece

**Abstract**

Background: It is known that disturbances in gene imprinting, defined as gene expression based on the gamete of origin, are implicated in oncogenesis through loss of tumor suppressor gene regulation. The inactivation of expression of NOEY2 gene, an imprinted putative tumor suppressor gene, may contribute to tumors arising in the breast. The aim of research was
to investigate the expression of NOEY2 gene in breast cancer tissue and its relation to clinical and molecular characteristics of cancer cells.

**Methods**

We studied the biopsy material of breast cancer cases and benign breast tumors (50 samples each). All cases were not BRCA-associated. The expression of NOEY2, ER, Ki67, p53, p21 and mdr1 genes was detected by Real-Time PCR using TaqMan® gene expression assays (Relative quantification, RQ). The expression of GHPDH gene was accepted as endogenous control. The BRCA mutations (c.181T>G, c.4034delA, c.5266dupC, c.68_69delAG of BRCA1 and c.5946delT of BRCA2 gene) were detected using TaqMan® SNP custom assays.

**Results:**

The NOEY2 mRNA was detected in 47 of 50 (94%) noncancerous tissues and in 41 of 50 (82%) breast cancer samples. In 15 of 41 (36.6%) NOEY2 mRNA-positive cancer samples the expression of NOEY2 was substantially reduced (up to 100 times). The expression of NOEY2 gene was positively correlated with the age of disease manifestation (r=0.59; P<0.05) and negatively correlated with the status of axillary lymph nodes (r= - 0.71; P<0.01). The expression of NOEY2 was not correlated with ER, Ki67, p53, p21 and mdr1 genes expression.

**Conclusion:**

Thus, the NOEY2 expression may play an important role in abrogation of the breast cancer pathogenesis. The link between epigenetic disturbances and the spreading mechanism of breast cancer may possibly exist.

These experiments were financial supported by private research laboratories. Conflict of interest: not declared.

**Evaluation of Plasma M2 Pyruvate Kinase in Breast Cancer**

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+Biology department, Hail University, KSA.
*Applied medical chemistry, # Oncology unit, Radiation science department, $Surgery department, Medical research institute (MRI), Alexandria University, Egypt.

**Abstract**

Background: Pyruvate kinase M2 (M2-PK) is a glycolysis rate limiting enzyme which provides a growth advantage to tumors.

**Aim**

This study aims to evaluate the diagnostic role of M2PK and CRP in metastatic breast carcinoma in relation to the well known routine marker CA 15-3.

**Methods**

The study included 70 females; 15 controls, 33 preoperative primary breast carcinoma clinically metastasis free and 22 clinically diagnosed as metastatic breast carcinoma. M2PK and CA 15-3 were detected by ELISA and CRP was quantified using the CRP LATEX kit.

**Results:**

During the clinical follow up period of 5 years, 60% (20/33) of primary breast carcinoma (clinically metastasis free) with preoperative high serum M2PK level developed metastasis. Metastatic breast carcinoma had significantly higher M2PK plasma values than primary breast cancer (p = 0.05) and controls (p = 0.01). A significant correlation was observed between M2PK level and tumor size (p = 0.05), CRP (p = 0.007), and CA 15-3 (p = 0.002) in the metastatic breast carcinoma. Survival was significantly shortened ( 2 = 13.841, p < 0.001) in patients with metastatic breast tumors with serum M2PK level higher than 15 U/ml irrelevant to the metastatic site.

**Conclusion**

These results support the usefulness of M2PK in predicting metastasis earlier than clinical manifestations.
Reducing Incidence of Early Removal of Central Line and Catheter Related Blood Stream Infections (CR-BSI) in Adult Hematology and Oncology patients at Tawam Hospital

Mohammed Saleh, RN, OCN, Ma. Reissa, RN (CN), Wendy Kopman, RN (CN) Sanjay R Jain, MD, PhD

Abstract

Background

Vascular access devices are an essential aspect in managing adult hematology/oncology patients; however infection remains the most common complication. Catheter-related blood stream infections have a negative impact on several healthcare measures such as increases in hospital length of stay, increased manpower and operational costs, and untoward patient morbidity and mortality. During the month of December 2008, 100% of inserted tunneled central line catheters in adult hematology/oncology units (n = 13) were removed early due to clinical suspicion of CR-BSI. The aim of this study was to identify factors which led to early removal of these vascular access devices and thereby set criteria to prevent unwarranted premature removal of inserted lines.

Method:

A concurrent chart review examining all inserted and removed central lines from January to March 2009 was performed in adult oncology/hematology cases using a multidisciplinary team (Medical oncologist, hematologist, infectious disease, infection control nurses, oncology nurses, vascular surgeons, radiation interventionists, and OR nurses). A total of 32 charts were reviewed.

Result:

Following the implementation of evidence-based central line insertion and care practices, the rate of line removal for clinical suspicion of CR-BSI significantly dropped from the baseline of 100% to 28% during January to March 2009.

Introduction/Background:

During the month of December 2008, 100% of inserted tunneled central line catheters (n = 13) were removed early due to clinical suspicion of CR-BSI. Further investigation indicated that 85% were removed unnecessarily due to lack of Center for Disease Control and Prevention (CDC) defined CR-BSI criteria.

Purpose:

This purpose of this study was to investigate and identify factors which led to the clinical practice of early removal of central lines and to measure the effect of introduction of evidence-based central catheter guidelines to reduce the risk of CR-BSI.

Materials and Methods:

The setting of this study was the adult Oncology/Hematology inpatient units at Tawam Hospital (combined 39 beds), a tertiary teaching hospital in the United Arab Emirates.

Based on the December, 2008 experience of clinical suspicion and early catheter removal, a set of evidence-based measures were implemented during January to March 2009 for use when evaluating reasons for central line removals. In the three months period, a multidisciplinary team (Medical oncologist, hematologist, infectious disease, infection prevention nurses, oncology nurses, vascular surgeons, radiation interventionists, and OR nurses), conducted concurrent reviews of all patients who had central lines either inserted or removed. The following program changes were implemented during the study period:

1- Adopting CDC definition of CR-BSI -- “Bacteremia/fungemia in a patient with an intravascular catheter with at least one positive blood culture obtained from a peripheral vein, clinical manifestations of infection (i.e., fever, chills, and/or hypotension), and no apparent source for the bloodstream infection except the catheter. Bloodstream infections are considered to be associated with a central line if the line was in use during the 48-hour period before the development of the bloodstream infection. If the time interval between the onset of infection and device use is greater than 48 hours, there should be compelling evidence that the infection is
related to the central line.” [1]

Simultaneously, the unit transited to implementation and strict enforcement of the following central line bundle criteria:

2- Using Central Line Bundle, a group of evidence-based interventions for patients with intravascular central catheters that, when implemented together, result in better outcomes than when implemented individually.

The five key components of this bundle are:

• Hand Hygiene: By doing proper hand washing with conventional antiseptic containing soap and water (recommended 2 minutes) or with waterless alcohol-based gels or foams;
• Maximal barrier precautions (e.g., cap, mask, sterile gown, sterile gloves and large sterile drape from head to toes as sterile field;
• Chlorhexidine skin antisepsis using 2% chlorhexidine with 70% alcohol;
• Optimal catheter site selection, with subclavian vein as the preferred site for non-tunneled catheters;
• Daily review of line necessity, with prompt removal of unnecessary lines by following hospital policy in maintenance care which includes:
  1. Remove the dressing and inspect the site closely if the insertion site is questionable,
  2. Replace dressings: every 2 days for gauze dressings and every 7 days for transparent dressings and if they become damp, loosened or visibly soiled,
  3. Checking entry site for inflammation with every change of dressing, monitor the catheter site visually or by palpation through the intact dressing every shift and document findings. Port cap changes were transitioned to no more frequently than every 72 hours in conjunction with solution administration set timing.
  4. Implementation of a clinical audit tool for insertion and care of central lines;
  5. Administration of prophylactic antibiotic (Cefazoline as per our institutional guidelines) either pre or intra-operatively;
  6. Catheter salvation except with confirmed microorganism(s):
     • S. aureus bacteremia;
     • Candida;
     • Gram negative rods;
     • Non-tuberculosis mycobacteria.

Results

32 charts were reviewed during January to March 2009, and results showed that following implementation of multidisciplinary committee recommendations, the number of central lines removed decreased from 13/13 (100% baseline) to 9/32 (28%) catheter lines removed in the subsequent three months from baseline data collection.

Conclusions

Overall, a 72% reduction in the number of catheters were removed based on clinical suspicion of CR-BSI alone was achieved (Table 1). Evidence suggests that the overall reduction in catheter removal was achieved through implementation of central line bundles for line insertion and follow-up care, and the use of multidisciplinary in determining line removal criteria. Our findings would suggest that these implemented strategies are associated with a reduction in premature central line removals as well as a reduction in CR-BSIs.

References

Tobacco Use Status in Relation to Oral Cancer: A Case-Control Study

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Abstract

Introduction

Oral cancer is one of the most common life threatening diseases all over the world, in particular Asian countries, and tobacco is considered to be the most potent risk factor for oral cancer. This study was conducted to investigate the relationship between tobacco use and oral cancer.

Methods

A case-control study of 350 cases and 350 controls over a period of 19 months during February 2005 and September 2006 was carried out in Pune, India. The self reported information about their consumption of tobacco and demographic status was collected by structured questionnaires. Univariate and multivariate analysis was used to identify the risk of tobacco use.

Results

The smoking and smokeless tobacco in the cases was significantly higher than the controls. Of the smokeless tobacco types, consumption of gutkha, OR = 12.8 (95% CI = 7.0-23.7) tobacco flakes, OR = 8.3 (95% CI = 5.4-13.0), supari, OR = 6.6 (95% CI = 3.0-14.8), mishiri, OR = 3.3 (95% CI = 2.1-5.4) and among smoking types, bidi, OR = 4.1 (95% CI = 2.4-6.9) showed the strong association with oral cancer after adjusting for possible confounders.

Conclusion:

Chewing gutkha, tobacco flakes, supari, mishiri and smoking bidi were more associated with a substantial risk of oral cancers in Pune, India.

Key words:
tobacco use, oral cancer, case-control study, Pune, India.

High-Resolution Genomic Profiling of Male Breast Cancer


Abstract

Male breast cancer (MBC) is a rare disease, accounting for <1% of all breast cancer cases. MBC is likened to postmenopausal female breast cancer, and patient management is based on this assumption. Despite many similarities, there are obvious differences between male and female breast cancer, including age distribution and risk factors. It is generally accepted that female breast cancer is a heterogeneous disease, but whether MBC can be classified into comprehensive molecular subgroups remains to be elucidated.

We have characterized MBC by genomic imbalances using high-resolution tiling BAC arrays, and compared it with a reference dataset of female breast cancers. Our data revealed a broad pattern of aberrations, confirming that
MBC is indeed a heterogeneous tumor type. Overall, MBC displayed more regions of genomic gains than female breast cancers, but fewer losses; furthermore, many aberrations were large, involving whole chromosome arms. The most common aberrations were similar to those documented in female breast cancer. High-level amplifications were less frequent (27%) in MBC tumors than in the female reference dataset (39%). Further, genomic aberrations in common among MBCs were also fewer compared to the reference dataset. Interestingly, three stable genomic subgroups of MBC were identified: the majority of the MBC tumors clustered in a group with striking similarities to a subset of luminal female breast cancers and contained all known BRCA2 mutated tumors. This group seemed to have the worst survival among all MBCs. The HER2 amplified MBC tumors clustered together in a small group where 17q12 was gained in all samples and which was similar to the HER2 subgroup of female breast cancer. The third subgroup was characterized by very few genomic alterations and did not resemble any of the subgroups in the female reference dataset, thus possibly constituting a novel subgroup of breast cancer occurring only in males, warranting further investigation. Taken together, genomic profiling of MBC revealed overall similarities with female breast cancer, with certain striking exceptions: genomic gains were more common in MBC and often involved whole chromosome arms, while losses of genomic material and high-level amplifications were less common. MBC could further be classified into comprehensive subgroups based on genomic profiles, one of which appears remarkably different from any genomic subgroup defined in female breast cancer. These findings suggest the existence of heterogeneity among breast cancers diagnosed in males, with potential implications for clinical management.

Experiential Beliefs of Oncology Nurses Working With Oncology Patients Who Do Not Know Their Cancer Diagnosis

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Abstract

Introduction and purpose: Oncology nurses encounter situations when patients do not know their cancer diagnosis because families want to keep a cancer diagnosis secret. Withholding truth from a patient may lead to an unhealthy environment and potentially may hinder therapeutic communication. Moreover, it becomes quite challenging for oncology nurses to care for a patient who does not know their diagnosis. The question remains how nurses handle situations of providing care and administering chemotherapy to the patients without discussing the diagnosis. This survey research explores experiential beliefs of oncology nurses in a tertiary hospital in the UAE working with oncology patients who do not know their cancer diagnosis.

Methods

A convenient sample of Registered Nurses was taken from oncology units in a tertiary teaching hospital in the UAE. A 28-item survey inventory was compiled from qualitative categories based on staff interviews. The inventory was intended to be exploratory in nature and provided a formative basis for further research. The first section of the questionnaire contained demographic variables. The second section included a series of inventory questions asking Registered Nurses to rank their responses using a five-point Likert-style scale regarding their experiential beliefs when attending patients who do not know their cancer diagnosis.

Results

Eighty-one percent of the Registered Nurses indicated they have cared for cancer patients who did not know their diagnosis. Seventy-four percent of the nurses were agreed or strongly agreed they would prefer to attend a patient who is aware of diagnosis and treatment plan.
Fifty-six percent of Registered Nurses agreed or strongly agreed that the frequency of hiding a cancer diagnosis from a patient is high in the UAE. Seventy-seven percent of the Registered Nurses agreed or strongly agreed that they cannot develop therapeutic communication with the patient if the cancer diagnosis is hidden from him/her. Sixty percent of Registered Nurses agreed or strongly agreed that physicians do not actively participate in the effort to change the existing culture of hiding a cancer diagnosis from their patients.

**Conclusion:**

The findings in this study show that a majority of Registered Nurses have cared for cancer patients who did not know their cancer diagnosis and most prefer to attend a patient who is aware of his/her diagnosis and treatment plan. Registered Nurses have also shown their concern about potential compromised therapeutic relationships with patients who are unaware of their diagnosis. Survey findings support the need for a more open dialogue between physicians, patients, and their families when it comes to cancer diagnoses. Lack of informed knowledge regarding a cancer diagnosis may be detrimental to a patient’s healing process, create mistrust, and may delay an appropriate grieving period when conditions are terminal.

**Nurses’ Knowledge and Attitudes Regarding Cancer Pain Management**

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**Abstract**

**Purpose**

The purpose of this study was to identify nurses’ knowledge and attitude in regarding pain management, to determine the effectiveness of an educational intervention to improve oncology patient’s pain management. Also to report on the development and outcomes of a comprehensive program to improve cancer pain management and patient satisfaction.

**Rationale**

Pain is a common symptom experienced by patient with cancer. Whether it is a result of a disease or disease related treatment. For other patients, the pain experience is less dramatic, but their pain is not managed in an optimal way. Assessment of the person with cancer pain is critical to appropriate and effective pain management intervention. The nurse is often one of the first to learn that a patient is experiencing pain and plays pivotal role in decision about pain assessment and management. Nurses must understand the patient’s experience of pain and be adequately prepared to offer variable options for effective pain management. Nurses should be advocates for cancer pain management. Because oncology nurses embrace holistic care and have sustained contact with patients throughout the continuum of cancer care, they are in a position to identify under-treated and untreated cancer pain and advocate for its relief.

**Design**

This pilot study will use (pre-test/post-test) design to study the effect of an educational intervention on nurses’ knowledge, and attitude, and clinical practice related to pain management. Six months follow up retest to determine the change in nurses’ knowledge regarding pain management.

**Setting**

The setting is the oncology department including oncology clinic, SMU 1 & SMU 2, radiotherapy, and breast care at Tawam Hospital.

**Sample**

The population of full-time licensed nurses and the nurses’ assistant interpreter who work in the oncology unites.

**Procedure**

Nurses knowledge and attitude about pain were measured with knowledge and attitude survey regarding pain management. The educational intervention included information about comprehensive pain assessment, pharmacologic/non-pharmacologic pain
Data analysis

More than half of the nurses thought that opioids can reduce all type of pain and we got the same result in the post test after the educational interventions were introduced. General patient presentation affected the attitude of more than 70% of the nurses regarding pain management. In the domain that elderly patients has decreased pain perception the oncology nurses scored more in line with recommended practices, in which 70% of the nurses disagree with this concept.

Findings

Despite the major educational initiatives, knowledge of pain management is still inadequate. Nursing management need to critically review their in service education and training is being taught in-depth and up-to-date pain management information that incorporates evidence-based research and current standards of care. Oncology nurses had a very good understanding of recommended practices of cancer pain management, but still struggled with understanding the pharmacology of medications used to manage cancer pain. Nurses do not use evidence-based practice in pain management consistently. Continuing education regarding cancer pain management remains important for oncology nurses.

Implication for practice

To improve nurses’ knowledge and attitudes regarding pain management, the educational activities may include the pharmacological area, patient assessment and the integration of knowledge about pain into daily practice. Adoption of evidence-based practice requires ongoing education of nurses and support from nursing colleagues, nursing administration, and associated healthcare providers.

Done: by Khaled Al qawasmeh, RN. MSN. OCNS. Master degree in Oncology Nursing, University Of Pennsylvania, PA, USA. Charge Nurse, Oncology Clinic/Infusion Center, Tawam Hospital, UAE. Special thanks for Dr. Steve Matarelli for analyzing the result using the SPSS and supervising the study.

Menopausal Symptoms among Saudi Arabia Arabian Women in Al-Khobar

Maha Alsejari, Kuwait University, Kuwait

Abstract

Introduction

Menopause is a physiological event, which occurs universally in all women who reach midlife. It is an important event that occurs within a long process of climacteric change from reproductive to post-reproductive phase of life . The scientific meaning of menopause is “the last menstruation” and usually the median age at menopause is 45-55 years.

The research seeks to determine factors and symptoms that Saudi Arabian women in Al-Khobar might experience during the menopausal transition. And whether these menopausal symptoms that were reported by Saudi Arabian women different or similar to the prevalence of menopausal symptoms among western women.

The Study Objectives

• Prepare Saudi Arabian women to adjust to the climacteric transition that is ending with menstrual cycle cession and to pass this event without a major health risk such as osteoporosis and cardiovascular disease

• Improve the health and well being of Saudi Arabian women by collecting data that helps me to detect factors which might contribute to a more rapid decline in ovarian function factors, and to ascertain whether these factors are the same or different cross culture.

• Detect menopausal symptoms that are frequently experienced among Saudi Arabia women and to assess the relationship between these symptoms’ prevalence and women’s perceptions and attitudes toward menopausal event and factors, such as reproductive history, daily life style, dietary habit, socio-economic status, and health, that might have contributed to the severity of experienced...
menopausal symptoms.

Research Design and Sample

• The research is a cross-sectional analysis, that is based on a confidential survey that distributed randomly across 200 Saudi Arabian women who live in Al-Khobar and whose median age is between 40-55 years.

• Subjects that had undergone pelvic surgery, premature menopause (the cessation of menstruation for at least 6 months before the age 40), using hormonal treatment, were included to compare their symptoms and health status with women who are undergoing a normal transition to menopause.

• The empirical data was collected based on a face-to-face administrated questionnaire, and its focus on the participant’s health, reproduction history, menopausal symptoms frequencies, and daily life style.

• Anthropometrics measures including height, weight, and body mass index (BMI) have been taken on each participant.

• Age at menopause was estimated from responses to the question “have you had a menstrual period in the last 12 months? ” Women were asked which symptoms had been experienced “recently” that were unusual or discomforting.

Analyses

• In this study menopausal factors that might affect menopausal symptoms were analyzed by using the Statistical Package for Social Science (SPSS 10.0, Chicago, IL, USA).

• Analyses of covariance (ANCOVA) were used to examine the correlation among menopausal factors (socio-demographic, reproductive history, anthropometric measurements, and life style), and age at natural meno pause and menopausal symptoms.

• Parity, number of miscarriages, family annual income, and total reported menopausal symptoms were treated as continuous variables. Socio-demographic factors, reproductive history factors, anthropometrics measures (body mass index); and lifestyle factors were treated as categorical variables.

• Multiple regression analysis , Pearson Correlation , ANOVA one-way analysis were applied to estimate the influence of independent variables (body mass index, and life style factors) on menopausal symptoms.

• Women were asked to relay their knowledge about menopause in an essay question and to identify the source of their knowledge by choosing among four categories: family, media, friends, and health professionals.

• Menopausal symptoms in this study were grouped into four main categories according to the origin of the symptoms that were believed to be the outcome of interaction between endocrinological, psychosocial and cultural factors during menopausal event : vasomotor (hot flashes, night sweats, and palpitation); somatic (numbness, dizziness, bones pain, headache, fatigue, shortness of breath, and bleeding), sexual behavior (loss of sex desire, vaginal dryness, and loss of urinary control) ; and psychological disorders (irritability, depression, anger ,sleeping difficulty, difficulty concentrating, and memory loss).

• All symptoms were recoded as being absent or present without any assessment of their frequency or intensity.

Results

• Mean age at natural menopause was 48.06 years (s.d.4.8). Age at last menstrual period ranged between 40 and 55 years old. The median age at natural menopause was 49.0 years.

• Respondent’s martial status were significantly associated with the prevalence of menopausal symptoms. Married women tended to report more frequently menopausal symptoms than did non- married women (single, divorced, widowed).

• Respondent’s number of children was
significantly associated with the prevalence of menopausal symptoms. This reached the highest point when respondents who have six children reported 24 totals of menopausal symptoms.

- Women’s attitudes toward menopause varied based on their menstrual status. Younger women whose ages range between 40-45 years old tend to have more negative attitudes toward menopause than women who were experiencing irregular menstruation or had ceased menstruation.

- Women’s attitudes toward menopause varied based on their ethnicity. Hadar women in general tended to be more optimistic and possessed more positive attitudes toward menopause than did Bedouin women.

- There was a significant association between the respondents’ total menopausal symptoms reported and their attitudes toward the menopausal event and the women’s educational level. Respondents with no education reported more frequently menopausal symptoms followed by respondents with 12 years of education.

Conclusion

Menopausal women were experiencing less climacteric symptoms than the European and North American women who reported more negative climacteric symptoms and more frequent visits to health practitioners. The menopausal symptoms that were reported among women can be attributed to the following:

- Most women have less time to devote to themselves and hence just ignore symptoms because they have less awareness or simply did not recognize the prevalence of symptoms were caused by endocrinological changes during menopausal event.

- The majority did not have a basic biological knowledge about the endocrinological feedback that triggered the onset of menopause and caused the prevalence of menopausal symptoms among the respondents.

- Beliefs played a major role in explaining the awareness of menopausal symptoms since almost all the respondents reported that the onset of menopause is normal and every woman has to go through and it is a God will that we have to respect and to cope with without complaint.

18f-Fluorodeoxyglucose Positron Emission Tomography (FDG PET) Response Predicts Survival in Primary Mediastinal Large B-Cell Lymphoma


Abstract

Background

Primary mediastinal B-cell lymphoma (PMBCL) is a distinct clinicopathological variant of large B-cell lymphoma. The optimal treatment is unknown, with some studies demonstrating favorable outcome compared to other types of diffuse large B-cell lymphoma. Role of 18F-fluorodeoxyglucose (FDG) positron emission tomography (PET) in this entity is not well reported.

Aims

In this retrospective study, we evaluated the primary presentation, clinical characteristics, treatment outcome and impact of FDG PET on PMBCL management at our institution.

Methods

All patients with PMBCL diagnosed and managed during 1995-2008 at our institution were identified from Oncology Data Unit. Patient’s characteristics, prognostic factors, details of treatment and outcome were reviewed.

Result

Forty-seven patients were identified. Median age was 30 years (range 18-66). There were 26 (55%) females and 21 (45%) males. Forty-two patients (89%) had stage I-II disease. Seventeen patients (36%) had ECOG performance status
of >2. Bulky disease in 37 (79%) patients. All patients received CHOP (with Rituximab in nine patients) chemotherapy followed by radiation therapy in 42 (89%) patients. Complete response rate + complete response unconfirmed was 76.6%. Median follow-up was 50.5 months and median overall survival (OS) and event free survival (EFS) were not reached. Univariate analysis showed female gender, early stages and response to treatment as good prognostic factors with higher OS and EFS, while response to planned treatment was the only factor that had impact on OS in multivariate analysis in all 47 patients. Twenty-five patients had FDG PET scan after chemotherapy. On Univariate analysis FDG PET negative patients showed significant improvement in OS and EFS compared to patients who were FDG PET positive; median OS and EFS were not reached in FDG PET negative patients and they were 22.2 and 5.9 months respectively in FDG PET positive patients (p=0.002 & 0.004 respectively). On multivariate analysis, female gender (p=0.046) was the only significant factor among metabolic response (p=0.099), CT response (p=0.518), and age (p=0.231). Regardless of IPI score, patients with metabolic CR on FDG PET had an excellent OS (p=.0005) and EFS (p=0.0056). Figure attached (OS).

Conclusion

In conclusion, Female gender carries favorable prognosis in PMBCL as reported previously in the literature. More importantly, despite having small number of patients with FDG PET, our data supports that achieving metabolic CR on FDG PET leads to significant prolongation of OS & EFS. Metabolically negative FDG PET is stronger predictor of OS and EFS compared to IPI in PMBCL.

Diagnostic Accuracy of Uterine Fluid Lactate Dehydrogenase Isoenzyme Activity Profile and Vaginal Ultrasound in Detecting Endometrial Cancer in Women with Postmenopausal Bleeding


Abstract

Objective

To evaluate the diagnostic accuracy of lactate dehydrogenase(LD) isoenzyme activity profile in uterine fluid and transvaginal ultrasound(TVS) in detection of endometrial cancer in women with postmenopausal bleeding(PMB) .Study design: prospective controlled clinical study

Methods

120 postmenopausal women with one or more episode of vaginal bleeding were studied. TVS endometrial thickness was classified as >5 mm or < 5 mm,. LD isoenzyme activity profile was described as normal or abnormal. . LD isoenzyme profile was subsequently related to histopathological diagnosis.

Results

Endometrial carcinoma was found in 10 of 120 patients (8.3%). Sixty seven patients (56%) were found to have endometrium > 5 mm thickness on TVS . LD isoenzyme activity profile was abnormal in 22 (18.3%) cases. Histopathological diagnosis in these cases revealed 10 endometrial cancers and 12 benign endometrium. LD isoenzyme activity profile has 100% sensitivity, 87.7%specificity, 69.5%positive predictive value, 100% negative predictive value, and 88.6% accuracy

Conclusion

LD isoenzyme profile of uterine fluid could be added as markers for endometrial cancer in postmenopausal women with endometrial thickness >5mm on transvaginal ultrasound. Uterine fluid sampling is easy, highly reliable, minimally invasive, with high patient compliance, and can be performed as an office procedure. Furthermore, this method is insensitive to endometrial thickness, amount of
Role of MRI in Local Staging of Cancer Rectum. Pros and Cons

Manar Talaat EL-Essawy, KSA

Abstract

Learning objectives

To evaluate the role of MRI in preoperative staging of cancer rectum and its utility in assessing tumor involvement in the circumferential margin (CRM), the anal sphincters and other pelvic structures.

Background

Accurate pre-treatment staging of rectal and anal cancer is critical because therapy should be individualized according to the tumors extension and the status of the regional lymph node. MRI provides some advantages, especially in depicting the depth of extramural disease, proximity to the circumferential resection margin (CRM), surrounding organ involvement, nodal disease, and in the setting of stenosing disease. MRI is also useful in assessing anal sphincter involvement in low rectal and anal cancers. With the advent of high-field MRI, high-resolution pulse sequences with higher signal-to-noise ratios can be performed with improved image quality, enhancing diagnostic accuracy and confidence.

Imaging findings OR Procedure details

A wide spectrum of rectal and anal cancer imaged with our new 3.0 Tesla MRI system is presented and correlated with histopathology. Extramural tumour depth, proximity to CRM, involvement of anal sphincter or surrounding organ and nodal spread are depicted mainly using multiplanar thin-slice 2D and 3D T2-weighted sequences. Pitfalls and limitations of MRI will also be presented. The relevance and impact of various MRI findings on cancer management and prognosis will be highlighted.

Conclusion

MRI provides accurate and key information for rectal and anal cancer staging which is crucial for the prognosis and the main factor affecting the outcome of surgery. In this way it is possible to tailor the treatment to specific selected cases.

Kras Mutation Incidence in Metastatic Colorectal Cancer and Response to Cetuximab: Preliminary Results in the Lebanese population

Habre Maya, Karam Walid, Kattan Joseph, El Karak Fadi, Chahine Georges, Nasr Fadi, Farhat Fadi, Ghosn Marwan, Lebanon

Abstract

Background/Purpose

KRAS mutation status predicts survival in patients with metastatic colorectal cancer (mCRC) treated with Cetuximab. KRAS mutation status (KRASMS) analysis started in Lebanon since September 2008.

Patients and methods

We performed a retrospective study on patients with mCRC who had their KRASMS analyzed in the only centralized laboratory in Beirut, Lebanon, using the sequencing method. Patients’ charts were reviewed looking for demographic informations, chemotherapy regimens, response to treatment and PFS. The objective of this study is to determine the incidence of KRAS mutation in Lebanon and to evaluate the response to Cetuximab with chemotherapy in wild-type patients compared to what is already published in literature.

Results

We analyzed tumor samples of 194 patients with mCRC looking for activating mutations in codon 12 or 13 on the KRAS gene. No mutations were found in 108 (55.7%) samples (wild-type), 57 (29.4%) had a mutation (mutated) and 29 (14.9%) didn’t have amplifiable DNA. We subsequently gathered the information of 36 patients who received their treatment in one large university hospital in Beirut, 23 were wild-type (63.9%) and 13 mutated (34.3%); median age was 61 years (36-79), with 19 males and 17 females. Of the 23 wild-type patients, 19 received cetuximab, 11 of them along with their
first line chemotherapy consisting of XELIRI (5 patients), FOLFOX (3 patients), FOLFIRI (2 patients), Oxaliplatin+Irinotecan (1 patient). Only 2 of the 11 wild type patients developed a progressive disease after first line chemotherapy with Cetuximab; 6 had stable disease and 3 partial response. Median PFS was 10.2 months. Five out of the 8 wild-type patients who received cetuximab in combination with their second or third line chemotherapy had a response. The collection of data is still ongoing.

Conclusions

The incidence of KRAS mutation in patients with mCRC in Lebanon seems similar to what is described in the literature. Proper identification of wild-type patients who are most likely to respond to cetuximab plus chemotherapy could result in a substantial drug cost savings, especially in a country like Lebanon confronted to health economic issues. Upfront KRAS testing should be done in all patients with metastatic colorectal cancer before initiating their treatment.

Initial Results of Bladder Preserving Approach by Chemo-Radiotherapy in Patients with Muscle Invading Transitional Cell Carcinoma

Mohamed A. Aboziada, Egypt

Abstract

Background

This study was conducted to test the efficacy and tolerability of trimodality treatment for invasive bladder cancer and to test the possibility of bladder sparing.

Methods

This study had been carried out on 50 patients with transitional cell carcinoma (TCC) stage T2-T3 tumor with adequate performance status and renal function. All patients were subjected to maximum transurethral resection of bladder tumor (TURBT). Patients were then subjected to chemo-radiation that was executed in two treatment phases. Phase I was external radiotherapy in the form of 46 Gy /23 fractions /5 weeks to whole pelvis with concurrent cisplatin 40 mg/m2 weekly. Phase II was 20 Gy / 10 fractions /2 weeks to the bladder tumor with concurrent cisplatin 40 mg/m2 weekly.

After phase I, patients who had complete response (CR) or partial response (PR) were subjected to phase II and patients who had stationary disease (SD) were subjected to salvage cystectomy. After the end of treatment, patients who had CR were subjected to bladder preservation. Radiological and cystoscopic reevaluation was done to assess the tumor response after phase I and phase II. After completion of the scheduled treatment, patients were under follow up for clinical examination, radiological, and cystoscopic assessment.

Results

The treatment scheduled was tolerable and associated with infrequent incidence of moderate toxicity that easily controlled without interruption of treatment. Bladder preservation was achieved in 72% of patients. The actuarial relapse free survival and overall survival at a median follow up 18 months for the patients who candidate for bladder preservation were 81% and 100% respectively. Invasive recurrence (16%) salvaged with cystectomy and superficial recurrence (6%) successfully treated with Bacilles bilie de Calmette- Guerin.

Conclusions

This study indicates that in spite of a relatively small number of patients and short follow up period; the trimodality treatment may be effective to achieve a high response rate in the treatment of invasive TCC bladder cancer. Thus, patients who have good performance status, early stage, absence of obstructive uropathy, absence of bilharziasis and complete TUR subjected to trimodality treatment.

Pi3k Pathway Stringently Controls Cellular Status of Pyruvate Kinase M2 to Determine Cancer Metabolism

Mohd Askandar Iqbal and Rameshwar Nk Bamezai, India

Abstract
In this study, we attempted to understand regulation of cellular status of a key enzyme, pyruvate Kinase M2 (PKM2), in cancer metabolism as a function of growth factor signaling. Inhibition of major growth factor signaling transducers (PI3K, mTOR and MAPK) resulted in down regulation of PKM2 expression and activity, except for PI3K, where ~30% increase in PKM2 activity was observed despite down-regulated expression of PKM2. However, the activity decreased in proportion to down regulated expression in mTOR and MAP kinase pathway inhibited cell lines. The unexpected effect of PI3K inhibition on PKM2 activity was mechanistically due to a shift in crucial PKM2 dimer/tetramer equilibrium in favor of highly active tetramer, as studied by density gradient centrifugation. Implication of the shifted dimer/tetramer equilibrium on the cellular metabolism was studied by LC-MS, which interestingly showed 25-30% reduction in intracellular levels of anabolic markers, ribose-5-phosphate and lactate, indicating the suppression of cancer metabolism. The study essentially depicts the stringent control of PI3K over PKM2 status, which is crucial in determining the metabolic fate of cells. Our study not only explores the broad spectrum regulation of PKM2 expression in proliferating cells, but also projects the unique potential of PI3K pathway in regulating the metabolic shift via PKM2 oligomeric state, hence widening the window of therapeutic interventions in cancer.

Pseudomyxoma peritonei A Rare Clinical Presentation

Surg. Dr. Mukhtar Mehboob, MBBS, FCPS, MRCS (Glasg), Pakistan.

Abstract

Pseudomyxoma Peritonei (jelly belly) is a rare clinical condition, arising usually from mucinous tumour of the appendix, ovary and sometimes from other organs. This condition may arise from retroperitoneal tissues as well, which is known as pseudomyxoma extraperitonei. Recent research indicates that clinical symptoms may be caused by an overwhelming increase in Muc-2 secreting cells as well as the fact that the excessively produced mucin has no place to drain. The origin of pseudomyxoma peritonei is controversial, clinical morbidity and mortality results from the fact that copious amount of extracellular and peritoneal mucin results in distortion and loss of function of visceral organs. The diagnosis of pseudomyxoma peritonei is made by CT scan, Ultrasonography and by plain film of abdomen. The final diagnosis is made by histopathological examination, which may be adenomucinosis, a hybrid group and mucinous adenocarcinoma. Cytoreductive surgery combined with perioperative intraperitoneal chemotherapy is the standard treatment. We have a series of three cases with varying clinical presentations. Interestingly our two patients were operated twice with no record of surgery and they are unaware of their diagnosis. Cytoreductive surgery along with chemotherapy was done in all three cases. All the patients have an excellent outcome. It is concluded that the knowledge of this rare disease is essential. Proper record keeping and histopathological examination are the essential tools to reach the early final diagnosis.

Audit of adjuvant vinorelbine and cisplatin for patients with resected NSCLC

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Abstract

Introduction

Lung cancer is the second commonest cancer and the leading cause of cancer deaths in the UK. In England and Wales, nearly 29,000 deaths were attributed to lung cancer in 2002. Only 10% of lung cancers present early enough in the UK to be operated on, and only a minority of these achieve long term survival. Adjuvant chemotherapy in completely resected non small cell lung cancer (NSCLC) offers disease free and overall survival benefit. However, it carries significant toxicity and careful patient selection is vital to ensure that the risks do not outweigh the benefits. Adjuvant chemotherapy is approved
by the National Institute for Health and Clinical Excellence for completely resected Stage Ib – IIIa NSCLC. The LACE meta-analysis of platinum based chemotherapy demonstrated an overall absolute improvement in 5 year survival of 5.4%, similar to survival advantages obtained in adjuvant therapy for colorectal and node negative breast cancer. We offered adjuvant chemotherapy to fit (PS0-1) patients from January 2005 with vinorelbine 30mg/m2 day1 & 8 and cisplatin 80mg/m2 day1 given every three weeks for four cycles (VC). We specified initiation of treatment within 8 weeks of surgery and audited our experience to determine the safety and feasibility of this approach.

Method: Retrospective review of case notes, electronic prescribing and pathology databases

Results:

489 patients underwent surgical resection of their cancer from 1st January 2005– 31st Dec 2008. 64 patients received adjuvant VC between January 2005 and January 2009. Data was retrieved on 62 patients. There were 41 men and 21 women, median age 61.62 years (range 34-79), all PS0-1. 92% were stage Ib-IIIa, 8% Stage IIIb. 61% patients started treatment within 8 weeks of surgery. Patients received a mean of 3.2 (median 4) cycles of treatment. 27/62 (44%) patients failed to receive all 4 cycles of treatment – 59% due to toxicity, 33% patient declined. 48% of patients were admitted for toxicity, 57% for febrile neutropenia, most of which (77%) occurred during the first 2 cycles. There were two deaths associated with febrile neutropenia; one additional patient required transfer to HDU for renal support. Only 10/22 (45%) patients experiencing neutropenia received GCSF with subsequent chemotherapy. Four patients went on to have a second episode of neutropenic sepsis. Three patients required prophylactic GCSF for prolonged neutropenia. 3 patients were admitted with GI toxicity and were successfully managed conservatively.

Conclusion

The majority of NSCLC patients are receiving adjuvant chemotherapy appropriately.

However, 44% patients did not receive all 4 cycles of treatment and we’ve experienced high levels of neutropenic sepsis (42%) with two treatment-related deaths. Consequently, we successfully submitted a business case for primary prophylaxis with pegfilgrastim. We aim to re-audit in 12 months time to assess the impact of the change in practice.

Switching to Letrozole versus Continued Tamoxifen Therapy in Treatment of Postmenopausal Women with Early Breast Cancer

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Departments of Clinical Oncology and Nuclear Medicine and Surgical Endocrinology*, Faculty of Medicine, Mansoura University, Egypt.

Abstract

Background

Tamoxifen was the mainstay of breast cancer therapy. Over time, resistance to tamoxifen may develop. The aromatase inhibitors have proven to be a powerful drug for use in hormone-sensitive early breast cancer. The switching strategy was designed to combine the apparent superior efficacy of aromatase inhibitors with tamoxifen favourable effects.

Methods

This study was performed on 120 postmenopausal women with histologically confirmed, hormone receptors-positive, operable invasive breast carcinoma who remained free of disease after 2 years of adjuvant tamoxifen therapy. They were randomized to receive either letrozole 2.5mg/day (60 patients) or to continue 20 mg/day tamoxifen for 5 years (60 patients).

Results

The treatment groups were well balanced in terms of age, tumour size, oestrogen and progesterone receptors status, and previous surgery. The disease recurrence was found in 10 women (16.7%) in the group received tamoxifen which was higher than in group of patients
switched to letrozole (5%), (P=0.04). There were 8 deaths (13.3%) in the group received tamoxifen and 3 deaths (5%) in group of patients switched to letrozole; P=0.11. Disease-free survival was higher in the group of patients switched to letrozole than in the group received tamoxifen, while overall survival was not statistically different between the two groups. Letrozole was associated with a significant lower rate of vaginal bleeding and thromboembolic events. However, bone fractures and adverse cardiovascular events were more frequent in the arm received letrozole than in the arm received tamoxifen but these differences were not statistically significant.

**Conclusion**

Switching to letrozole after 2 years of tamoxifen is better than continuing five years of tamoxifen therapy as regard efficacy and tolerability.

**Key word**


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**Radiation Protection of Thyroid during Antero-Posterior Chest Radiographs of the Paediatric Patients.**

Pir Shariq Momin, Shaukat Khanum Memorial Cancer Hospital and Research Center, Lahore, Pakistan

**Abstract**

**Objectives**

A study was conducted to assess whether the thyroid of the paediatric patient is frequently expose to radiation during an Antero-Posterior chest radiograph and propose a method of reducing radiation to the thyroid during an AP chest radiograph.

**Methods**

A retrospective review of 150 Antero Posterior (AP) paediatric chest radiographs was carried out at our hospital. An inclusion and exclusion criterion was applied. Each of the radiographs was assessed by the Medical Imaging Technologist, on the basis of proper collimation. Proper collimation of an AP chest radiograph should only include 7th cervical vertebra to costophrenic angles of the lungs.

**Results**

In AP chest radiograph of paediatric patient out of 150 radiographs only 29 (19.3%) radiographs were properly collimated. The remaining 121 (80.6%) radiographs were improperly collimated and all of them were exposing thyroid (most radiosensitive organ of the region) to radiation.

**Conclusion**

This study demonstrated that the thyroid is frequently exposed to radiation during an AP chest radiograph of the paediatric patient, due to the anatomical location of the thyroid (i.e. C5 to T1 vertebrae). In order to protect the thyroid from radiation during an AP chest radiograph, a thyroid collar must be designed for the paediatric patient that must be worn during an AP chest image. Radiographers must also be trained enough that they must have the knowledge of proper collimation from the X ray tube that would result in reducing the radiation dose to the radiosensitive organs.

**3d-Qsar Analysis and Adme Predictions of Quanylhydrazone Coactivator Binding Inhibitors of the Estrogen Receptors**

Sergey Shityakov, Thomas Dandekar, Warzburg University, Germany

**Abstract**

**Purpose**

To investigate, analyze and improve a series of 17 guanylhydrazone coactivator binding inhibitors for the ER.

**Methods**

The three-dimensional database was created on a basis of the MOE molecular modeling package. The molecules contain different IC50:
cell-based assay of reporter gene activity (CBA) and mammalian two-hybrid assay (M2H). The IC50 was converted to pIC50 scale (-log IC50), in which higher values represent higher exponential potency. The QSAR models were built for both sets of pIC50 values separately to distinguish the best model. The predicted pIC50 parameters of entire training set (best-fit model) were cross evaluated and validated with the descriptors of the test set of molecules. The dataset included the same 17 molecules.

Results

Measured activities (-log IC50) versus predicted activities came up with the correlation plots for CBA as R = 0.9984, R2= 0.9969, -log IC50 predicted= 0.996895 and for M2H as R = 0.9529, R2 = 0.9080, -log IC50 predicted = 0.908014. The ‘residual’ deviation was not exceeding 1.0 or more units of ΔpIC50, which represented a good fit to the experimental data. ‘Residual’ deviation (SDΔG= +/-1.0) was equal to the experimental activity (-log IC50) except to the predicted activity (-log IC50). There were only two Z-score outliers, the choice of descriptors can be considered as adequate. We defined ΔΔG as the difference of the ΔG (Gibbs free energy of binding parameters were taken from the Autodock output files) for experimental and docking values as: ΔΔGdock actual= 1 / (ΔGdock actual - mean ΔGdock actual); ΔGdock refined= mean ΔGexp + ΔΔGdock actual. SDΔG= +/-0.04. ΔG was calculated as ΔG = RT ln(IC50). The ADME properties showed a predicted possibility of these compounds to inhibit some of the key cellular proteins, such as G-protein coupled receptors and nuclear receptors.

Conclusions

In the present study, we have analyzed a series of 17 guanylhydrazone coactivator binding inhibitors for the ER. We prepared and characterized the dataset of potential inhibitors of estrogen receptors; build a QSAR model, which is based on the experimental data (IC50). The compounds represent binding affinity modes in cell-based assays and docking studies, which have strong correlations upon the 3D QSAR model. Additional work related to the activity and receptor specificity of these and other coactivator binding inhibitors will be the subject of the further analyses.

Pet Imaging in Oncology and its Role in Detecting the Metastatic Deposits in the Axilla of a Breast Cancer Patient with Locally Advanced Breast Cancer

S. Mustafa, P.Griffith, O.Erimen, UK.

Abstract

Aims

The aim of this study was to assess the ability of double headed Gamma Camera PET using 18-FDG in demonstrating metastatic deposits in the axillary lymph nodes of breast cancer patients and compare it with histopathology which is the gold standard.

Methods

PET scanning with 18-FDG was performed in patients with breast cancer measuring >2CM on clinical examination and/or palpable lymph nodes. In 27 Patients with the mean age of the patients was 68,and range (43-83). All these patients underwent triple assessment e.g. (1) clinical examination (2) imaging (mammography, ultrasound) and (3) biopsy (FNAC/core-cut). Following injection of130 MBq of FDG images were obtained using an ADAC Solus camera with MCD capability. The images were reported blind and the results were compared with the results of triple assessment and final histopathology.

Results

20 out of27 patients preceded to surgery whereupon 12 were found to have involved axillary lymph nodes. GCPET was positive in 10 of these cases (sensitivity=83%, specificity=92%). The 2 false negative lymph nodes had micrometastasis (<4mm).

Conclusion

GMPET is a sensitive and specific method of detecting metastatic deposits in the axillary lymph nodes in patients with LABC. It may obviate or minimise the need of surgery in this group of patients.
Cost-effectiveness of FDG PET Imaging in Cancer Patients

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Abstract

Background

Positron emission tomography (PET) using 18F-fluorodeoxyglucose is highly accurate in the evaluation and management of patients with nearly all solid tissue cancers. This increase in accuracy compared to conventional imaging with CT, MRI, and ultrasonography has been shown to reduce futile surgeries and improve overall management in many if not most cancer patients. However, it is an expensive technology. In terms of its economic impact, is the benefit of improved medical care resulting from PET.CT imaging greater than cost of the scan?

Objective

evaluate and summarize the medical literature looking at the cost-effectiveness of PET imaging in cancer patients.

Methods

the following medline search was performed: Prior to that the cost of PET and PET.CT was not well established. Review articles were excluded. Only papers adressing cancer patients were included.

Results

62 research papers were identified which after review 27 addressed the topic of cost-effectiveness of FDG PET imaging in cancer patients. Of these, 26 papers (96%) found FDG PET to be cost-effective and 1 found it not cost-effective. FDG PET was found to NOT be cost-effective in staging the axilla in patients with breast cancer (1). The other 27 papers found PET to be cost-effective in: evaluation of an adrenal mass in patients with known malignancy (1); colon cancer (2); head and neck cancer (3); lymphoma (3); musculoskeletal tumors (1); non-small cell lung cancer (8); pancreatic cancer (1); patients with a solitary pulmonary nodule (6); and finally, patients with a wide variety of solid tissue cancers (1).

Conclusion

FDG PET is cost-effective for a wide variety of solid tissue cancers, with the strongest evidence being its cost-effectiveness in the management of patients with lung cancer and with solitary pulmonary nodules.

Bidding “good bye” to Drains can be a Boon to Women Undergoing BCT and Oncoplastic Surgery – Thomas Technique Described for the First Time

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Abstract

Background

Drains for seroma are part of standard of care universally in BCT and Oncoplastic surgery. Axillary clearance remains as standard of care in node positive early breast cancers. Drains increase hospital stay, morbidity, delays adjuvant treatment and doesn’t guarantee prevention of subsequent seroma. Saline instillation into the dissected dead spaces leading to pressure above central venous pressure is a novel; unique and easily reproducible method to block lymph venous ooze from dissected area. This reduces morbidity, hospital stay, more than 80% of cost, improves compliance and offers best quality of life.

Objective

Development of a safe, universally acceptable and reproducible, technique to prevent morbidity of drains and seroma in BCT and Oncoplastic surgery.

Method

Women with operable breast cancer constituted the study group,(904) They were randomized to Group 1(450) with conventional drains following BCT and group 2 with no drains(454).
Standardization of technique

25 Consecutive cases with operable breast cancer formed pilot study. The post surgery defect of BCT was filled with Normal saline irrespective of size of the defect till the transducer installed in the cavity showed pressure above CVP. Color Doppler evaluation of the axillary vein and artery were done during the procedure to check for any ill effect on vessels. The pressure within the cavity was plotted graphically every following day with the indwelling transducer till it showed no residual fluid. Vigorous physiotherapy was started on the first post operative day. Complete resorption of saline and empty cavity on ultrasound evaluation within 7 days was observed in all cases. Once the standardization was completed patients were discharged within 24 hours onwards. No patients were kept beyond 4 days.

Plausible Explanation And Technique:

Suction applied to indwelling drains will keep the mouth of the traumatized capillaries and lymphatic vessels open, facilitating lymphorea. Venous channels will have valves which ultimately blocks oozing. The process continues even after removal of drain and massive seroma follows necessitating repeated aspirations. This continuous ooze and seroma further will further prevent the sealing off the vessels and prevent skin flap from getting adherent to the chest wall. Similar processes at a lesser degree will take place at primary resection site. In this novel technique Normal saline which is isotonic with body fluids is injected into the cavities after achieving perfect hemeostasis Once the pressure within the cavity reaches above CVP, as shown with transducer, it blocks the mouth of the oozing micro capillaries, venous channels and at a greater extent lymphatic channels since central lymphatic pressure is still lower. This will seal off the oozing due to pressure from within unlike drains keeping the mouth of the vessels in open form. Vigorous physiotherapy helps in the absorption process of saline, rather than oozing into cavity. Normal saline might exert sclerosant effect on lymphatic channels, which needs to be studied.

Results:


Conclusion:

This novel, cost effective, drain less technique is, helps in faster rehabilitation in terms of psychological, physical, occupational, emotional and sexual aspects, reduces morbidity, shortens adjuvant treatment time interval, reduces hospital stay and costs incurred, better acceptable for family, and improves quality of life. These results are reproducible across the globe as it is simple and cost effective. This simple technique may change the philosophy of local management of breast cancer world over in terms of reducing morbidity, cost, introducing day care service, and offering best quality of life.

Effect of Ayurvedic Therapy on Patients with Relapsed Acute Promyelocytic Leukemia

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Abstract

Context: The introduction of all-trans retinoic acid (ATRA) and, more recently, arsenic trioxide
(ATO) into the therapy of acute promyelocytic leukemia (APL) has revolutionized the management and outcome of this disease. Several treatment strategies using these agents, usually in combination with chemotherapy, but also without or with minimal use of cytotoxic agents, have provided excellent therapeutic results. However, about 15% - 20% of patients relapse, mainly patients with high-risk APL. Treatment of relapsed/advanced APL includes the use of ATO, gemtuzumab ozogamicin, and hematopoietic stem cell transplantation. However, many relapsed APL patients who are reluctant for further chemotherapy and/or hematopoietic stem cell transplantation may opt for complementary and alternative medicine. Ayurvedic therapy is a popular option among such cancer patients.

**Method:**
Specific Ayurvedic Treatment Protocol (AYTP) to treat APL patients was developed by the principal author based on his clinical experience. The medicines were herbo-mineral in nature and were prepared under GMP certificate from the State Government.

**Participants:**
Seventeen relapsed ALP patients volunteered for the AYTP of their own.

**Result:**
Marked response of the AYTP was observed in 12 (70.5%) patients as 5 patients has so far completed over 10 years and 6 patients over 5 years survival, respectively, after the start of AYTP. One patient survived for 13 years after initiating AYTP. In 4 patients the AYTP was stopped after one year and in 3 it was stopped after 2 years. However, 4 patients are still continuing AYTP intermittently. The AYTP was well tolerated and no adverse side effects were noticed in any patients.

**Conclusion:**
In absence of any other therapy the observed effect in the relapsed APL patients could be due to the AYTP.

**Cervical Carcinoma, a Leading Cause of Postmenopausal Bleeding (A Cross-Sectional Study of 120 Cases)**

**Yasmeen Niazi**

**Abstract**

**Background:**
Postmenopausal bleeding has become an alarming cause of concern in developing countries like India because it is most often associated with uterine malignancy. To assess its different causes, a cross-sectional study was carried out in the Deptt. of Obstetrics & Gynecology NSCB Medical College Jabalpur (MP) India.

**Objective**
To study the etiology and pattern of postmenopausal bleeding (PMB) in the local population approaching Medical College Hospital.

**Design:**
A cross-sectional study

**Methodology**
In this study 120 consecutive patients of 45 years age or more, who presented with postmenopausal bleeding (PMB) from June 2008 to May 2009 and visited Department of Obstetrics and gynecology, Netaji Subhash Chandra Bose Medical College and Hospital Jablpur(MP), India were taken. In this study patients on HRT were not included. We investigated the histopathological findings in women presenting with postmenopausal bleeding in a population predominantly of rural Indian origin, low socio-economic status and low level of literacy by conducting a cross-sectional study. Different observations were taken regarding postmenopausal bleeding with respect to age, menopausal age, past history, duration of bleeding, site of bleeding and grading of malignancies on the basis of clinico-pathological investigations and these were correlated with patients age, duration of bleeding and length of postmenopausal interval.
Conclusion

PMB is a symptom of different etiologies. The associated incidence of malignancy is very high in patients with poor socio-economic status, low level of literacy, late presentation and rural background in the study and thorough diagnostic evaluation is necessary. The mean age of women under study was 57 (SD 7.8) years. Mean menopausal age was found 48.7 (SD 4.4) years. Total occurrence of PMB cases was found 3.0% in one year period of study. Malignant causes were found in 72 (60%) patients. Cervical carcinoma was the most common malignancy (54.1% of the total patients) followed by Ovarian cancer (2.5%), endometrial carcinoma (2.0%) and Carcinoma Vulva (2.0%). Important benign causes were prolapse uterus (18.9%), atrophic vaginitis (20.8%), atrophic endometrium (12.5%), cervicitis (12.5%), pyometra (4.1%) and cervical polyp (8.3%). Other benign causes include endometrial hyperplasia (6.3%), endometrial polyp (6.3%). The delay between the onset of bleeding and presentation is worrisome and suggests the need for public education.

Keywords

Postmenopausal bleeding, cervical carcinoma, endometrial carcinoma, atrophic vaginitis, malignancy, ovarian cancer, carcinoma vulva