INCHES Bulletin January 2007

Editorial

The core group members of the INCHES Health Foundation send their greetings and best wishes for a happy, healthy and prosperous 2007.

The highlights last year were the Update 2006 and the outstation CME at Alibag which were grand successes. We hope to have more such programmes during the current year.

Today leprosy can be fully cured and, when diagnosed early in the cycle of the disease, the patient will be completely normal. Yet leprosy continues to exist and grow in areas of desperate poverty. In India alone, leprosy disables 100 times more people than polio each year **!** January 31st**.** , is World Leprosy Day. Let us rededicate ourselves to the task of early diagnosis, proper treatment and follow up, rehabilitation and patient education as a giant step towards a world without leprosy.

Included in this issue are guidelines pertaining to drug treatment of type II diabetes and management of breast cancer.

Pleasant reading!

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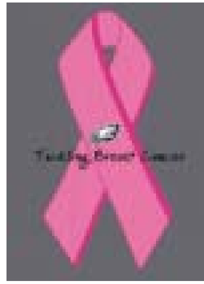

UPDATED GUIDELINES FOR DIAGNOSIS AND TREATMENT OF IMAGE-DETECTED BREAST CANCER

- Mammography is the only imaging modality that should be used routinely to screen women for breast cancer. However, MRI may be used to screen younger women with a high risk of breast cancer because of a strong family history or *BRCA* mutation.
- MRI findings should be combined with other imaging data or histologic results prior to surgical planning. Diagnostic ultrasonography can be helpful in characterizing known breast masses, as it is more sensitive than mammography in evaluating tumor size.
- Minimally invasive breast biopsy is the optimal initial method for tissue acquisition for image-detected breast lesions, in large part because the determination of cancer prior to surgery improves outcomes of breast-conserving therapy. For microcalcifications without an obvious mass, the authors recommend vacuum-assisted devices with needle sizes of 11 gauge or larger. Fine-needle aspiration is suitable for lymph-node evaluation but less so for evaluation of breast lesions.
- Biopsy specimens should be labeled by surgeons to preserve three-dimensional orientation. Radiography or ultrasonography of the surgical specimen can be useful in determining whether the target lesion was successfully removed. Two views should be used for specimen radiography.
- Pathologic breast specimens should be evaluated using the Nottingham Combined Histologic Grade, which accounts for glandular differentiation, mitotic count, and nuclear grade. Ideally, these findings are combined with radiologic data at a treatment conference involving pathologists, radiologists, and surgeons.
- Pathologists should read both prognostic size, determined by the extent of the largest invasive component of the tumor and helpful in predicting survival and distant metastasis, as well as the overall size of the breast tumor.
- Intraoperative ultrasonography and bracketing localization wires can aid in defining the limits of resection in breast-conserving surgery, as can preoperative MRI and ultrasonography
- Sentinel lymph node biopsy is the preferred means of pathologic axillary nodal staging. However, patients should be made aware of the possibility of a false-negative result with such testing. When the

sentinel lymph node reveals minimal involvement of 0.2 mm or smaller, complete axillary dissection is not necessarily indicated
- Regarding treatment of DCIS, adjunctive radiation therapy has been demonstrated to reduce rates of local failure but may not improve survival. Older age, smaller, widely excised DCIS, and low- or intermediate-grade histology mitigate against using radiation therapy following surgery for DCIS. The use of adjunctive tamoxifen for patients with DCIS is controversial, but it seems to be more helpful among patients with receptor-positive DCIS. Sentinel lymph node biopsy generally has no role in the staging of DCIS, but it should be performed in women receiving mastectomy for DCIS
- Hormonal therapy should be offered to all women with hormone-receptor–positive tumors, and the minimum period of treatment is 5 years. Patients receiving other chemotherapy should receive both an anthracycline and a taxane. However, chemotherapy in addition to hormonal therapy is less likely to provide an overall clinical benefit for women older than 60 years of age with hormone-receptor–positive tumors or or for those older than the 70 years with any breast cancer

J Am Coll Surg. 2005;201:586-587

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MANAGEMENT OF HYPERGLYCEMIA IN TYPE II DIABETES MELLITUS
AMERICAN DIABETES ASSOCIATION / EUSD GUIDELINES

General
- Hospitalization is not required to initiate or adjust therapy except in patients with diabetic ketoacidosis or extremely catabolic or hyperosmolar who are unable to hydrate themselves adequately
- The patient should be trained and empowered to prevent and treat hypoglycemia as well as to adjust medicines with the guidance of health care providers to achieve glycemic goals
- The levels of plasma or capillary glucose that should result in long-term glycemia in the nondiabetic target range , as measured by A1C, are fasting and pre prandial levels between 70 and 130 mg/dl.
- If these goals are not achieved or AA1C remains above the desired target, post prandial levels, usually measured 90-120 min after a meal may be checked. They should be less than 180 mg/dl to achieve A1C levels in the target range

Therapy
Step 1: Lifestyle intervention and metformin
- Life style interventions should be initiated as the first step in treating new onset diabetes
- Life style interventions should remain an underlying theme throughout the management of diabetes mellitus even after the medications are used
- Metformin therapy should be initiated concurrently with lifestyle intervention at diagnosis
- Metformin is recommended as the initial pharmacologic therapy in the absence of specific contraindications
- Metformin treatment should be titrated to its maximally effective dose over 1-2 months, as tolerated
- Rapid addition of other medicines should be considered in the setting of persistent symptomatic hyperglycemia

Step 2: Additional medications

- If lifestyle intervention and maximal tolerated dose of metformin fail to achieve or sustain glycaemic goals, another medication should be added within 2-3 months of initiation of therapy or at any time when A1C goal is not achieved
- The second medication added after metformin , is to be chosen from insulin , sulfonylurea urea or a TZD (glitazone)
- Insulin (basal- intermediate or long acting) should be considered for patients with A1C > 8.5% or with patients with symptoms of hyperglycemia
- While choosing new agents, their cost must be balanced against their relative benefits

Step 3 Further adjustments

- If lifestyle intervention , metformin and a second medication do not result in goal glycemia, the next step is to start, or to intensify insulin therapy
- When A!C is close to the goal (<8.0%), a third oral agent could be considered, however this approach is relatively more costly and not as effective in lowering glycemia with adding or intensifying insulin (short or rapid acting insulin given before selected meals
- When rapid or very rapid acting insulin injections are started, insulin secretagogues (sulfonylureas or glinides) should be discontinued or tapered and then discontinued

Rationale in selecting combinations

- Selection of individual agents should be made on their glucose lowering effectiveness and their other characteristics
- While adding second and potentially third hyperglycemic medications, the synergy of particular combinations and their interactions should be considered
- In general, antihyperglycaemic drugs with different mechanisms of action will have the greatest synergy
- Insulin plus metformin and insulin plus TZD are particularly effective means of lowering hyperglycemia
- TZD and metformin increase sensitivity to insulin, they have different target organs and have been shown to have modest additive effects

Special considerations patients

- In severe uncontrolled diabetes mellitus with a catabolism (fasting plasma glucose > 250 mg/dl, random glucose levels consistently > 300 mg /dl, A1c > 10%, or symptomatic diabetes) insulin therapy with life style intervention is the treatment of choice
- After symptoms are relieved , oral agents can often be added and it may be possible to withdraw insulin if preferred

Ref:
David Nathan, Roger Holman et al, management of hyperglycemia in type II diabetes mellitus, A consensus algorithm for the initiation and adjustment of therapy, A consensus statement from the ADA and EASD, Diabetes Care, Volume 29, No. 8. August 2006

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COMMON PAEDIATRIC SURGERY PROBLEMS -2

Acute pain and swelling in the scrotum

Possibilities

- Testicular torsion (Surgery only)
- Epididymo-orchitis (Medical therapy only)

Differentiation

- Clinical examination
- Doppler examination
- Exploration – safest in all cases

Circumcision

Indications

- Symptomatic phimosis
- Ballooning of prepeuce
- Recurrent balanoposthitis
- Long redundant prepeuce
- Paraphimosis in past
- Injury – zipper most common
- Boys with diagnosed urinary anomalies-VUR

Advantages of Circumcision

- Neonatal urinary tract infections are less
- Indications for circumcision in 5 % boys later
- Penile cancer 3 – 40 fold more in uncircumcised later in life
- Sexually transmitted diseases are less likely
- Decreased recurrent UTI in boys with VUR

Post operative care

- Keep dry for first 3 – 4 days
- After that regular bath with hot hip bath
- Local application of ointment daily
- Swelling & scabs will form and remain
- Swelling will gradually decrease over time

Hypospadias

Types

- Glandular
- Coronal
- Distal penile
- Mid penile
- Proximal penile
- Peno-scrotal
- Scrotal
- Perineal

Surgical Correction

- Ideal age 1 ½ years
- Single stage correction
- Two stage correction
- Catheter stent – 8 days
- Compression dressing

(Based on a lecture by Dr. Vivek Rege, Consultant Paediatric Surgeon at INCHES' Outstation Update, Alibag)

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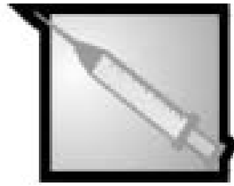
Know the drug



ALPHA BETA ARTEMETHER

It is a synthetic derivative of artemisinin, a product of Chinese plant, developed by Central Drug Research Institute, Lucknow.

Mechanism of action:

- Has a rapid blood schizonticidal agent for P. Falciparum at erythrocytic stage' probably by following mechanism:
  - Inhibition of protein synthesis
  - Alteration of ribosomal organization
  - Action on membrane by lipid peroxidation
- Has gametocytocidal action on the parasite

Indications;

- Severe P. Falciparum malaria
- Chloroquine resistant malaria
- Cerebral malaria because it is more lipophilic and accumulates more in the brain tissue

Dosage and Administration:

- 150mg (1 ampoule) once daily, on 3 consecutive days
- In children, 3mg./kg. Daily for 3 days
- The injection has to be given deep intramuscularly in upper external quadrant of the buttock
- No other drug should be mixed in the same syringe

Precautions

Used with caution in pregnant and lactating woman.

Side effects:

- Neurotoxicity, like gait disturbances, loss of spinal cord pain responses, in coordination, respiratory depression, convulsions and cardio-respiratory arrest, in high doses.
- Nausea, dizziness and depressed GI activity.

Medinews

TV VIEWING HAS ANALGESIC EFFECT DURING VENIPUNCTURE IN CHILDREN

Children who were distracted by television rather than by their mothers during venipuncture reported less pain, according to the results of a study. In this study, 69 children aged 7 to 12 years undergoing venipuncture were randomized to receive no distraction procedure (controls), active distraction by their mother, or passive distraction by a television cartoon. After venipuncture, the mothers and children scored the intensity of pain during the procedure. Children's mean pain scores were lower for the television group vs. the M group Mothers' mean pain scores for their children were lower for television group vs. control and M groups

TV watching was more effective than active distraction. This was due either to the emotional participation of the mothers in the active procedure or to the distracting power of television.

Arch Dis Childhood. 2006;91:1015-1017.

HERNIATED DISK IMPROVES WITH EITHER SURGICAL OR NONSURGICAL TREATMENT

Patients with herniated disks had improved outcomes during 2 years whether treated surgically or nonsurgically, according to the results of the Spine Patient Outcomes Research Trial (SPORT)..
SPORT is a study comparing early operative vs. nonoperative approaches for patients with radicular pain and confirmed intervertebral lumbar disk herniation. Patients with radicular pain who chose surgery instead of nonoperative care tended to be younger, receive some form of disability compensation, and have more severe symptoms. This open trial found that, while both the operative and nonoperative cohorts improved with time, diskectomy was associated with improved outcomes in terms of pain, physical function, and disability at 3 months and 2 years after treatment selection.
JAMA. 2006;296:2441-2450, 2451-2459, 2483-2485, 2485-2487.

QUIZ MANIA 61

75 year old male presented with a painless swelling 3cm x 2cm, of the left parotid gland. It was soft in consistency, A superficial parotidectomy was done and histology showed large glandular acini, embedded in dense lymphoid tissue in which lymphoid follicles . What is the diagnosis?

ANSWER TO QUIZ MANIA 60

Diagnosis : Nodular Goitre
Further Investigations : T3, T4, TSH, USG,FNAC, Nuclear scan