

SELECTED ABSTRACTS FROM NATIONAL MEDICAL JOURNALS

Pages with reference to book, From 277 To 278

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RADIATION STERILIZATION OF MEDICAL PRODUCTS. Khurshid, S.J., Hussain, M.A. Science Tech. and Develop., 1989; 8 : 39-49.

Sterility or absence of microorganisms from medical and surgical devices is an important aspect in the treatment of patients and ensuring their safety. The main group of the microorganisms concerned are the bacteria and the fungi. Technically advanced countries have achieved a high quality of health standard by stressing the vital need of sterile medical supplies in health care. The conventional methods of sterilization being used in Pakistan are heat sterilization where a combination of temperature, pressure and time are used, and gas sterilization by using formaline or ethylene oxide. The heat method cannot be used for products which are moisture and heat sensitive whereas the ETO has its drawbacks too. It increases environmental pollution, penetration to the innermost layers of the articles is poor thus leaving them unsterile. Ionizing radiation especially gamma radiation has definite advantages. It destroys the organisms either directly or disrupts their D.N.A. 150 different species including some very resistant ones are killed by a dose of 2.5 M rads. Ionizing radiation has been used in most of the advanced countries since the early sixties. It has a high sterility assurance level, there is no toxic residue, items can be used immediately after the procedure and heat sensitive and plastic materials can be sterilized by this method. A key advantage of radiation sterilization over other methods is that products are sterilized after being finally packed thus avoiding re- contamination. Today about 142 industrial radiation installations, using Cobalt-60 are being used for radiation sterilization in 45 countries with a total output of 4 million cubic meters per year. Pakistan has also entered this safe way of sterilization by installing a commercial gamma irradiation plant at Lahore with Cobalt-60 source of 200,000 Ci. This facility would contribute significantly to the locally produced disposable medical and surgical products and thus lead to a higher standard of public health care in Pakistan.

IDIOPATHIC JUVENILE OSTEOPOROSIS. Shams, S. Pak. A.F. Med. J., 1989; 26 : 37-40.

The case of idiopathic juvenile osteoporosis in a 9 year old boy is presented. The first symptoms were agonising pain in all four limbs, more on walking and running. Gradually he became slow in the movements and could take a few awkward steps only. Spontaneous swelling with deformities of the fingers and toes developed after four months. There was no history of steroid administration. The family history was insignificant and the past history showed a clavicle fracture at 7 years age which healed in 4 weeks time. The diet was obviously poor in calcium. Physical examination revealed a height and weight below third centile, mild kyphoscoliosis in the dorsolumbar region, deformed fingers and toes which were tender and painful. Laboratory investigations inclusive of serum calcium were within normal range. Faecal calcium could not be estimated so a negative calcium balance could not be determined. Radiologically marked osteoporosis was noted in all the long bones and of the hands and feet. Bone biopsy confirmed osteoporosis. The patient was diagnosed as idiopathic Juvenile Osteoporosis and was treated with 4 Gm calcium and 2mg 25 Hydroxy cholecalciferol daily along with physiotherapy. Progress was satisfactory and after 8 months the child was symptom free except that he had a little limp. The deformities of the fingers and toes had also disappeared. The x-rays showed bones with normal density. The first case of idiopathic Juvenile osteoporosis was described in 1938 by Schippers and 12 cases have been reported after that. A negative calcium balance with a high excretion rate of calcium in stools has been quoted by all. The basic cause of osteoporosis is still obscure. It could be due to a low calcium diet over a prolonged period or a defect preventing incorporation of calcium in the bones. The drugs used for treatment over the passage of times have been agreed upon to

be calcium and vitamin D with physiotherapy giving physical relief. Sex hormones were ruled out due to lack of convincing effects in cases having received them.

ANEURYSM SINUS OF VALSALVA WITH SUPRACRISTAL VSD. Haq, M., Khan, A., Kiani, M.R., Khan, Z.A. Pak. A.E Med. J., 1989; 26 : 46-48.

The case of a supracristal VSD with a large aneurysm of the sinus of valsalva protruding into the right ventricle, in a young man of 18 years is presented. The main symptoms were dyspnoea on effort and palpitation of six months duration. On examination a collapsing pulse was noted with a pan systolic murmur 4/6 and early diastolic murmur extending into mid-diastole 3/4 was heard on the left sternal border. A palpable thrill was associated. The ECG showed a left ventricular hypertrophy. An increase CT radio was noted on the chest x-ray with prominent pulmonary artery and left ventricular configuration. There was a marked pitlmonary plethora. Echocardiogram showed a grossly dilated left ventricle with good contractility and mild dilatation of the left atrium. A moderate sized perimembranous VSD was preseüi with grade II aortic regurgitation. Surgery was performed in which the aneurysm was obliterated, the VSD repaired and a Starr Edward prosthetic aortic valve replaced. The recovery was uneventful and the patient was discharged from hospital on oral anticoagulants.

Aneurysm of the sinus of valsalva usually cause no cardiac dysfunction and are symptomless. The presented case was investigated for a supracristal VSD and an associated aneurysm was detected. The serious complication of the aneurysm of the sinus of valsalva is its rupture. There is sudden chest pain and dyspnoea. Thediagnosis is confirmed by echocardiography and aortography. A successful surgical obliteration of the aneurysm gives dramatic relief of the symptoms.

LEUKAEMIC RETINITIS - A CLINICAL STUDY. Singh, G., Kaur, J. Pak. Acad. Ophthalmol., 1988; 2: 11-14.

200 patients suffering from different types of leukaemia were subjected to funduscopy to determine the ocular manifestations. These individuals were either admitted in the G.R. Medical College Hospital, Gwalior or presented themselves in the outpatient department. A detailed clinical history was obtained and a general examination carried out. Funduscopy was done under full mydriasis by direct and indirect ophthalmoscopy. Fundus changes were noted in 106 cases with pallor being present in ali. In the acute leukaemia cases flame shaped hemorrhages, discrete hemorrhages and sub-hyaloid hemorrhages were noted. Cotton wool exudates and dilated tortuous veins were also present in some cases. Fundus changes were more frequent in patients who had a haemoglobin less than 4 Gm and a platelet count less than one hundred thousand. The chronic leukaemic cases had marked dilatation of veins in the fundus. Superficial and deep hemorrhages were noted and six cases had disoedema. Retinopathy was observed when the haemoglobin was below 4 Gm and the platelet count less than one lac. Leukaemic retinitis was first described by Gower in 1904. Great variations have been reported by other workers later. In the presented series vasodilatation was a marked feature which could be due to retinal anoxaemia. Haemorrhages are frequently seen in leukaemia cases and retinopathy has been documented though in this series there was no relationship with the total peripheralwhite cell count. None of the retinal abnormalities implied a grave prognosis. It was also apparent that the fundus changes were not significantly different in myeloid and lymphatic leukaemia.