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A Study on Management of Osteoarthritis with Intra Articular Steriods.

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ABSTRACT

Background: Osteoarthritis is most common from joint disease of ageing-In the united states Osteoarthritis prevalance will increase by 66 -100% by 2020. It is a major cause of pain and disability in older people. Commonly effected joints are cervical, lumbosacral, hip, knee and first metatarsal phalangeal joints (MTP) Usually the wrist, elbow and ankle joints are spared. Aim of the Study: To study the managament of Osteoarthritis with the help of intra articular steriod injections in rural medical college in South Inda. **Methods:** We have conducted this study in 210 Osteoarthritis patients for 1 year out of these 210 females are 115 (54.76%) and males are 95 (45.24%). **Results:** Out of 215 OA patients total 76 patients recevied who articular injections into Bilateral knees, Female were 46 (40%) males were 30 (31.57%), 82 total patients received injection into left knee. 53 females(46.08%) 29 males (30.25%) and 43 patients received injections into right knee. Females 24 (20.88%) and males 19 (22.51%). 80 patients received monthly intra articular steriod injections. 8 patients received injections 1-3 months interval and, 3 patients received at 3-6 months intervals. **Conclusion:** In the treatment of Osteoarthritis, the steriods especially triamcinolone as intra articular injections has got good efficacy for pain and functional ability.

Keywords: Osteoarthritis, inflammation, morbidity, steriods, cartilage.

INTRODUCTION

Osteoarthritis is most common from of joint disease. It mainly effects elderly people and more commom in females than males. According to cadaveric studies, structural changes of Osteoarthritis are nearly universal.[1-3] The changes includes cartilage loss (seen as joint sapace loss on X-ray) and Osteophytes. By defination Osteoarthritis is a joint failure, a disease in which all structures of joint have undergone pathological changes often in concer the pathalogic sinequa non of disease is hyaline articular cartilage loss present in focal and initially in non-uniform manner. This is accompanied by increasing thickness and sclerosis of subchondral bony plate, by outgrowth of Osteoaphytes at the joint margin. In knees meniscal degeneration is part of the disease.[4] Joint Vulnerability and joint loading are 2 major fatcors contributing to the devlopment of OA. Osteoarthritis of hip is raise in china and imigrants from china to the United Stated. Osteoarthritis knees is a major cause of disasility in China especially in rural area. Persons from Africa, but not African Americans may also have a very low rate of hip OA.[5]

Risk Factors for Osteoarthritis are age, obesity, anatomical abnormalities, Repeated trauma is most potent risk factor for OA aging increases joint Valunarability through several mechanisum whereas dynamic loading of joints stimulates cartilage matrix synthesis by chondrocytes in young castilage, aged castilage is less reponsive to these stimuli muscles that bridge the joint become weaker with age and also respond less quickly to oncoming impulses.[6]

OA is highly heritable disease but its heritability is joint specific. 50% of hand and hip OA in the community is attributable to inheritance i.e, to disease present in other members of family. Tears of ligaments and fibro cartilaginous structures that protect the joint, such as anteriors cruciate ligement and the meniscus in the knee and the labrum in the hip can lead to premature OA.[7]

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Weakness in the quadriceps muscle bridging the knee increases the risk of the devolopment of painful OA in the knee. Obesity another major riskfactor. 3-6 times body weight is transmitted across the knee during single leg stance. Any increase in the weight may be multiplied by this factor to reveal the excess force cross the knee in over weight person during walking.

Major pathological changes are castilage loss, formation of Osteophytes. And major symptoms are joint pains and stiffness of joints.

Non-steroidal anti inflamatory drugs are commonly used in patients with joint inflammation. NSAIDS can be used as orally and topically drugs like ibuprofen and diclofenac are used, but the side effects like gastritis, fluid retention, exacerbation of bronchial asthma, are very common so in certain group of patients there is a need for intra-articular injections with cortico steroids(8). Synthetic gluco corticoids are injected through intra articular route into effected joint. Triamcinolone acetonide(TA) is a synthetic glucocorticoid used commonly for intra articular injection in patients with Osteoarthritis.

MATERIALS AND METHODS

We have exminied 210 OA Patients. Out of these 210 patients, females are 115(54.75%) Males are 95(45.25%). Out of 115 Females, 20 Patents are between 40-49yrs, 28 are between 50-59yrs, 36 are between 60-69 yrs and 31 patients are above 70yrs. Out of 95 male patients, 18 patients are belongs to 40-49 years, 32 patients are between 50-59yrs, 37 patients are between 60-69yrs and 17 patients are above 70years.

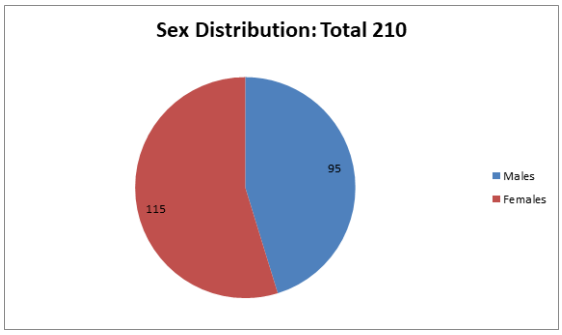

Chart 1: Sex Distribution.

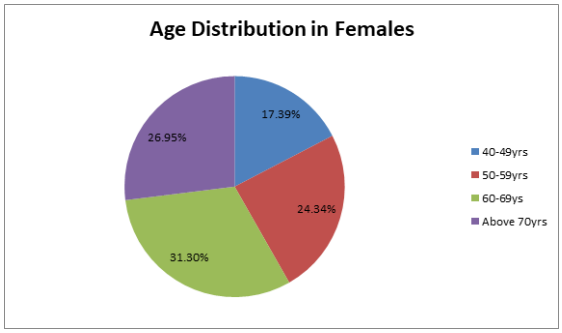

Chart 2: Age Distribution in Females

Table 1: Age Distribution in Females.

S.No	Age	No. of Patients	Percentage
1	40-49yrs	20	17.39%
2	50-59yrs	28	24.34%
3	60-69ys	36	31.30%
4	Above 70yrs	31	26.95%

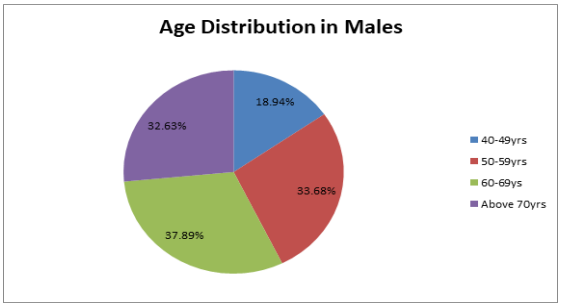

Chart 3: Age Distribution in Males

Table 2: Age Distribution in Males.

S.No	Age	No. of Patients	Percentage
1	40-49yrs	18	18.94%
2	50-59yrs	32	33.68%
3	60-69ys	37	37.89%
4	Above 70yrs	17	32.63%

Age wise distribution of patients among males all these patients are having Osteoarthritis diagnosed by orthosurgeons in our out patients department all these patients are not responding to exercise and NSAID theraphy so with the consent of patients we planned for intra articular steroids theraphy with triemcinolone acetonide. Patients above 40years with symptamatic Osteoarthritis, according to American college of Rheumatology and radiographic evidence of OA were considered. The exclusion criteria included patients with secondary Osteoarthritis, severs axis deviation of knee, varas/ Valgus deformity of knee >15°, Platelet disorders, neoplasms (8). Dieppe PA Sathapata yanongs B, Jones HE, Bacon PA, RhamatoRhehabili. 19.212-217.

RESULTS

Table 3: Different joint recevied intra articular injections

S. No	Type of joint	Female	Percent%	Male	Percent %
1.	Bilateral Knees	46	40%	30	31.57%
2	Right Knee	53	46.08%	29	30.25%
3.	Left Knee	24	20.88%	19	22.5%
4.	Other	6	5.23%	5	5.02%

Out of 215 OA patients total 76 patients recevied who articular injections into Bilateral knees, Female were 46(40%) males were 30(31.57%), 82

total patients received injection into left knee. 53 females(46.08%) 29 males (30.25%) and 43 patients received injections into right knee. Females 24(20.88%) and males 19 (22.51%). 80 patients received monthly intra articular steriod injections. 8 patients received injections 1-3 months interval and, 3 patients received at 3-6 months intervals.

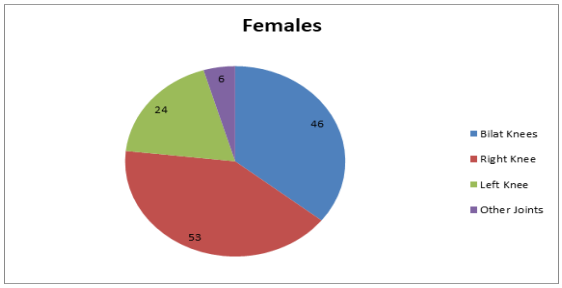

Chart 4: Different joints involved in Females.

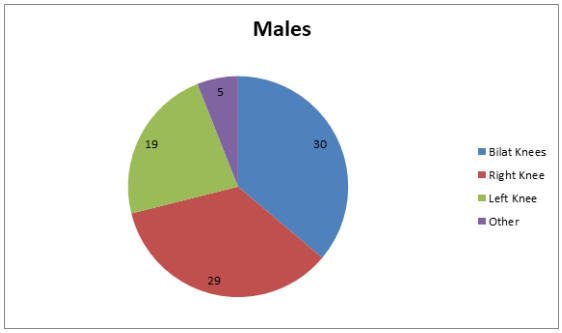

Chart 5: Different joints involved in Males.

DISCUSSION

The managements of Osteoarthritis includes NSAIDS exercise and intra articular injections with glucocorticoides and hyluronic acid. And simplest effectives treatment for Osteoarthritis is to avoid activities that parecipitates pain. Weight loss may have commansuarate multiplier effect including pain in those joint. For knees and hip OA trials have shown that excercise lessens pain and inproves physical function.[9]

NSAIDS are the most popular drugs to treat Osteoasthritic pain. They can be administared either topically or orally.

Figure 1: X Ray of Wrist.

Intraarticular glucosticoids, especially triamcinolone acetonide has got good response in decreasing the symptoms of Osteoarthritis. Osteoarthritis is a slowly evolvong articular disease characterized by a gradual devolopment of joint pain stiffness, and less of full range of movements. Most important pathologyical change is degeneration of cartilage. Osteoarthritis is a complex interaction of degradation and repair of the cartilage inflammation.[10] Studies showa that chandrocytes from Osteoarthritis patients have been demonstrated to be deficient in glucocrticoid receptors.[11] The resulting decreased responsiveness of Osteoarthritis cells to circulating glucocorticoid may be among the factors that lead to an increased levels of cytokine and metalloprotease synthesis is degrading cartilage. The steriods are administered mainly for releif of symptoms According to study conducted by Batch HW et al intra articular steriod theraphy plays an important role in the management of chronic arthritis. Accordong to study conducted by vallonen EJ in a RCT single blind study over 6 months showed that intraarticular steriods may give long term benefit of Osteoarthritis sysmptoms.

CONCLUSION

In our study the results with intra articular injection with glucocorticoids are encouraging. According to other studies also intra articular injections with triamcinolone acelonide are one of the important treatment options for Osteoarthritis.

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