SUMMARY

The importance of the menisci in the knee has become increasingly apparent in recent years, as additional knowledge of its various functions has been gained. They contribute to the stability of the knee, they are important in load-sharing and transmission, they help in lubrication and facilitate the nutrition of the articular cartilage, and their experimental removal results in irrevocable effects on the articular cartilage.

The surgical management of meniscal injuries has been a controversial issue among surgeons since the first open meniscectomy was done in 1866 . Recent reports have emphasized the long-term consequences of total open meniscectomy such as degenerative arthritic changes, instability, and changes in transmission of load across the knee joint. Also, the early long-term results after partial meniscectomy has suggested its detrimental effects.

Although total open meniscectomy used to be one of the most common of all orthopaedic procedures, and technique and instruments were developed to ensure the completeness of resection, a concentrated effort in the recent few years is being made, whenever practicable, to save as much of the meniscus as possible.

The position and vulnerability of the menisci in an area of rapidly changing torque, shear, and compressive forces reflects on their complex functions and importance.

In this work, we evaluated the case of fifty knees in fifty patients with an arthroscopically proved meniscal tear. All knees in this study were subjected to: clinical assessment, diagnostic arthroscopy, and arthroscopic meniscal repair using outside to inside to outside technique.

In order to concentrate entirely on the results of the meniscal surgery, all knees included in this work were selected as follows; there was no ligamentous laxity as proved clinically, it has not been operated on previously, no other surgical operations was carried out at the same time of arthroscopic meniscal repair and all meniscal tears were in the vascular repairable area of the meniscus and in the middle or anterior zones i.e. either longitudinal at zero millimeter to four millimeters from the menisco-synovial junction or a detached anterior horn tear as proved arthroscopically. Also there were no marked degenerative changes as proved clinically and radiographically.

The average patient age at the time of surgery was 25 years (range 19 to 34 years).

The follow-up period averaged 20.5 months (range 6 to 35 months).

There were thirty (60%) peripheral tears and twenty (40%) detached anterior horn tears.

There were thirty seven (74%) tears of the medical meniscus and thirteen (26%) of the lateral meniscus.

The right knee was affected in thirty-two (64%) and the left knee in eighteen (36%) patients.

The length of time from injury to surgery averaged 10.68 months with a range from one to thirty-six months.

Due to the general absence of symptoms in most of the cases, follow-up arthroscopy was not practical or possible in all cases because it was very difficult to convince asymptomatic patient to have an operation. Therefore, we considered healing after arthroscopic meniscal repair on clinical bases using the criteria of Hamberg et al (1983).

The overall results showed that forty-three patients (86%) were asymptomatic and seven (14%) patients were symptomatic.

Of the thirty periphral tears, twenty-five repaired menisci (83.3%) were classified healed, two (6.7%) as incompletely healed and three (10%) as not healed. Of the twenty detached anterior horn tears, eighteen (90%) were classified as healed and two (10%) as not healed.

We concluded that, in general, the higher rate of healing was associated with the more peripheral tears. Also the detached anterior horn tears showed a higher rate of healing (90%) than did the longitudinal peripheral tears (83.4%). The length of tear and history of locking did not substantially affect the rate of healing. The interval between injury and surgery did not significantly affects the rate of healing.

Forty-five (90%) patients were able to return to the same activity in which they had been injured; including the five parachute jumpers.

Fortunately, there were no neurological or vascular complications in this series.

As meniscectomy, either total or partial, open or arthroscopic, is not a benign procedure, meniscal repair is seems to be a logical alternative to restore the normal kinematics of the knee joint.

Our early-term results of arthroscopic meniscal repair has indicated its protective effects. However, this procedure will be vindicated only after longer-term studies which will show either its success or its failure in preventing the changes in the joint that are noted after meniscectomy.

Until these studies are forthcoming, we believe that arthroscopic meniscal repair can be done safely, with reliable results, and should be the procedure of choice for repairable lesions of the meniscus.