

GLYCOSAMINOGLYCANS AND AMINOHEXOSES IN SYNOVIAL FLUID OF INJURED KNEE JOINTS

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GLYCOSAMINOGLYCANS AND AMINOHEXOSES IN SYNOVIAL FLUID OF INJURED KNEE JOINTS (ZAWARTOŚĆ GLIKOZAMINOGLIKANÓW I HEKSOZOAMIN W PŁYNIĘ STAWU KOLANOWEGO PO USZKODZENIU WIĘZADŁOWYM)

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Injuries to the ligaments and meniscus of the knee are associated with increased risk for developing post-traumatic osteoarthritis connected with an increased release of proteoglycans and glycosaminoglycans from the cartilage. There is little information on the proteoglycans and glycosaminoglycans in the synovial fluid of an injured knee joint.

The aim of our investigation has been to evaluate the levels of glycosaminoglycans and amino hexoses in knee joint fluids in relation to the time which has passed after injury. Samples of knee joint fluid were collected during routine diagnostic arthroscopy, 3 weeks to 27 months after injury, from 18 patients (13 men and 5 women) aged 17-38 (mean 24.9 years) .In this fluid were determined : proteins, uronic acids and hexosamines. Glycosaminoglycans were released from proteoglycans by papain digestion, and separated on microcolumns with CF-11 in to : hyaluronic acid, heparan sulphate, chondroitin sulphate -4 and -6, and keratan sulphate.

In the synovial fluid from the knee joint we have found the highest levels of hexosamines and glycosaminoglycans occurring at 1 month after trauma, and diminishing after that.