ETIOPATHOGENETIC FACTOR FOR PERMANENT PATELLAR LUXATION

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Congenital permanent patellar luxation is characterized by its fixation and lateral position. Both passive and active patellar reposition is impossible. The whole extensor apparatus of the knee is laterally removed. The loading of the lower limb is impeded.

The diagnosis of this patellar anomaly is relatively easy still in newborns because of the lateral position of the patella. Both musculo-tendineous and ligament-capsular apparatus of femuro-patellar and knee joints is adapted to this fixed and abnormal patellar position during child's growth. The development of the patella itself and of femoral and tibial condyles becomes abnormal, too. The form of the knee joint alters in a values position. All this results in functional knee insufficiency.

Speed and Knight (1956) accept that the reason for the unset patellar luxation is "an anomaly in m. quadriceps femoris, accompanied by lack or underdevelopment of m. vastus medialis, shortened m. vastus lateralis, and hypoplastic patella."

Volkov (1962) considers that "the disturbance of neuro-muscular apparatus is of basic importance for congenital patellar luxation." The other musculature of the thigh is shortened and sclerotic.

Shojlev writes that "dysplasiae of bones forming the knee joint as well as axial deviations in the knee are characteristic for permanent patellar luxation (3).

In our Clinic we have hospitalized a total of 52 patients with patellar luxation till 1987. 12 cases (23.1 per cent) of them are with permanent patellar luxation.

In the course of operative treatment it was established that patella was fixed laterally to the knee joint by stable, wide, short and thick tendinous ligament originating from the lateral patellar edge. This ligament is insered to the ileotibial tract (fig. 1). The resection of this tendinous ligament reveals that it consisted of tendinous fibres similary to these of lig. patellae proprium. Thus two tendons originate from permanently luxated patella. The one of them is beginning from the distal end of the patella and it represents lig. patellae proprium. The other one initiates from the lateral end of the patella and is inserted to the ileo-tibial tract. Both tendons are almost perpendicular to each other. Therefore, in the case of this pathologo-anatomical finding patella is permanently fixed laterally to the knee joint and the activity of m. quadriceps femoris remains abnormal. During passive and active knee joint movements the crus moves in dorsal and fibular direction. There is a valgus position of the knee as patella is located in the top of this angle. Being located on the lateral side of the external femoral condyle patella forms a lair with ectopically lying femuro-patellar joint. Patellar roentgenogram is negative in childhood. Later on facial roentgenography shows patellar luxation.

Permanent patellar luxation can be the only anomaly or can be combined with other anomalies, too: congenital deformed feet, congenital coxofemoral joint luxation and other anomalies of limbs and trunc.

The treatment of the disease is determined by this pathologo-anatomical finding. An operation is required in early infancy before beginning to walk. In 1978, we elaborated a method for operative treatment of permanent patellar luxation (2). It consists in liberation of patella from the lateral side of the knee and alienation of the extensor apparatus by using the tendon

of m. gracilis without osteotomy of tuberositas tibiae. The usage of the tendon of m. gracilis with reserved distal insertion to per anserinus results not only in patellar stabilization in a normal position but also in supporting of knee antero-medial instability. By this way patella is retained distally at two points to the tibia, namely to tuberositas tibiae and per anserinum. Operations of the kind of this of Hauser (4) on tuberositas tibiae at this early infancy lead later on to knee recurvation.

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ЭТИОПАТОГЕНЕТИЧЕСКИЙ ФАКТОР ПОСТОЯННОГО ВЫВИХА НАДКОЛЕННИКА

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РЕЗЮМЕ

Постоянный вывих был обнаружен у 12 пациентов (23,1%) всех случаев из 52, которые лечились по поводу вывиха надколенника.

При оперативном лечении постоянного вывиха надколенника было установлено наличие дополнительной сухожильной связки, которая начинается с бокового рубца надколенника и захвачена за подвздошно-большеберцовый тракт. Эта сухожильная связка фиксирует коленную чашечку в постоянном ненормальном положении к наружному мыщелку бедра. С ростом организма мышечно-сухожильный, суставно-связакый и костный аппараты колена адаптируются в порочной позиции.

Лечение оперативное. Оно осуществляется в начале хождения. Необходим срез этой дополнительной сухожильной связки коленной чашечки к подвздошно-большеберцовому тракту, а также фиксация коленной чашечки в нормальном положении. Нами сохраняется бугристость большеберцовой кости, чтобы позже не получилась рекурвация колена. Фиксирование коленной чашечки в нормальном положении и наряду с этим укрепление передне-медиальной нестабильности колена осуществляется путем введенного нами оперативного метода. Этот метод предполагает использование сухожилия тонкой мышцы с сохранением ее дистального прикрепления.