CAVERNOUS HAEMANGIOMA OF THE KNEE JOINT

Report of a Case

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A girl aged eight and a half years complained of swelling and discolouration of the left leg with chronic pain in the knee and a limp made worse by exercise. A patchy birthmark extending from hip to heel had been treated with radium at the age of eighteen months. Aching pain in the knee had been present for five years. There was nothing relevant in the family history. 

On examination general health was good. In the left lower limb a bluish mottling of the skin, due to a diffuse cavernous haemangioma, extended from the left buttock to the heel (Fig. 1). Swelling of the knee affected mainly the suprapatellar region. The swelling was suggestive of fluid within the joint, but differed from a fluid effusion in being compressible. It was not affected by elevation of the limb. Only the extremes of joint movement were limited. There was no crepitation. The legs were equal in length. There was slight wasting of the thigh and calf. Radiographs showed no bony abnormality and no soft-tissue shadow. The Mantoux test (1: 100) was negative. The Wassermann reaction was negative. The blood cholesterol was normal and the erythrocyte sedimentation rate was 2 millimetres in the first hour. Cavernous haemangioma of the knee was diagnosed.

At operation, a diffuse extra-synovial cavernous haemangioma was found bulging into the suprapatellar pouch and holding the patella away from the femur. It gave rise to the sensation of patellar tap, but there was no fluid in the joint. Boiling water was injected into the mass of veins, which shrivelled up immediately. The knee was closed without drainage.

Since the operation the patient has been free from symptoms. The scar shows some tendency to haemangiomatous change. A small swelling is still present and patellar tap can be elicited though less easily than before operation.

DISCUSSION

Cavernous haemangioma of the knee joint, although uncommon, gives a characteristic clinical picture. Only forty cases had been recorded up to 1939, when the literature was completely reviewed by Bennett and Cobey. Since then eleven further cases have been recorded (Cobey 1943, Cole and Hunt 1949, Harmon 1943). In the knee joint
the tumour occurs in two forms: in one there is extensive, diffuse involvement of the synovial membrane associated with a naevoid condition of the leg; in the other there is a localised pedunculated mass. The symptoms of both types are usually similar.

Patients are commonly brought for advice early in life, as with the superficial types of haemangioma. Females are affected more commonly than males. In almost every instance there is a story of intermittent swelling of the joint associated with pain and limp. Injury is sometimes mentioned, but is probably only a precipitating factor. During the exacerbations the knee may be tender. Limitation of the extremes of movement and a sensation of a spongy mass are usual. In many cases the mass is compressible or is diminished by elevation of the limb. Crepitation is uncommon. The limb may be longer than the other. Moderate atrophy of the thigh muscles is usual. An associated superficial naevus often suggests the correct diagnosis. Radiographic examination is essentially negative—as distinct from the cases in which haemangioma involves bone—though a soft-tissue shadow may be detected. The condition may be differentiated from tuberculosis, syphilis, traumatic effusion, internal derangement of the knee joint, chronic infective arthritis, and xanthomatous or hypertrophic villous arthritis.

**Treatment.** *Injection of sclerosing fluids*—Various chemical sclerosants have been tried but reports have not been encouraging. Our preference, based on experience of the usual types of cavernous haemangioma (Cole and Hunt 1949), is for thermal sclerosis by the injection of boiling water (Wyeth 1903).

*Excision*—This is the ideal treatment in the pedunculated type. In the diffuse type it is difficult and the result is uncertain (Bennett and Cobey 1939). Successful results have been claimed after synovectomy (Harmon 1943).

*X-ray therapy*—The results of X-ray therapy are reported to be satisfactory (Bennett and Cobey 1939, Cobey 1943).

**REFERENCES**