CONGENITAL DISCOID MEDIAL SEMILUNAR CARTILAGE

GEORGE MURDOCH, DUNDEE, SCOTLAND

Since the original description of a dissecting-room specimen of a congenital discoid lateral cartilage by Young of Glasgow in 1889, numerous publications have appeared on the subject. The stage has now been reached when it is recognised to be fairly common. Abnormalities of the medial cartilage on the other hand are rare. In this report three examples are described.

Smillie (1948), in a contribution of twenty-nine cases of discoid lateral cartilage, reported the various lesions found in these abnormal structures and classified them as primitive, intermediate and infantile. In the primitive type the cartilage exists as a complete disc; the infantile approaches the normal but is abnormally broad. It is on the basis of this arbitrary classification that the literature is reviewed and discussed.

The first reference to an anomalous medial cartilage is that of Watson-Jones (1930), who described a ring-shaped cartilage at a meeting of the Royal Society of Medicine. The illustration shows longitudinal striations on both central and peripheral parts of the "ring," which suggest that this specimen was probably a normal cartilage, the subject of a complete longitudinal (bucket-handle) tear with the central part displaced and altered by time and pressure. This view is supported by Elmslie's comments at the meeting.

The first record of an undisputed discoid medial cartilage is that of Cave and Staples (1941). Of the two specimens they described, one is undoubtedly discoid, with an anterior split and a notch such as is characteristic of lateral discs (Smillie 1948). This is an intermediate type of discoid cartilage. The other specimen was said to be "incompletely discoid" and to have a "bucket-handle" split. This is probably an example of the infantile type.

Dwyer and Taylor (1945) reported a discoid medial cartilage which was virtually a complete disc and, without question, of the primitive type. This specimen demonstrated the characteristic "horizontal cleavage" as described by Smillie (1948), who reported a similar specimen encountered in 1943. This exhibited cystic degeneration in addition to horizontal cleavage, almost the entire under surface being worn away.

Jeannopouloos (1950) reported the removal of discoid cartilages from the knee of a girl of ten, the medial in 1938 and the lateral in 1942. The medial cartilage was "abnormally wide, pear-shaped" and measured 5 centimetres by 2-7 centimetres by 0-8 centimetre. The upper surface showed a transverse ridge, the inferior was roughened and horizontal cleavage was present. This specimen, though not illustrated, was, from the description, probably infantile.

A case of "ring-shaped medial semilunar cartilage" was published by Basmajian (1952). The specimen was similar to that of Watson-Jones (1930) and cannot be accepted as a discoid cartilage. In the opinion of Professor R. I. Harris, who saw the specimen, which had been removed from a dissecting-room male subject, it represents an old longitudinal tear with complete displacement of the medial fragment.

De Palma (1954) described and illustrated a specimen which at the posterior horn was abnormally broad. The rest of the cartilage, however, was of normal dimensions and showed a longitudinal tear and a pedunculated tag. Though this specimen is unusual it is probably an example of the infantile type.

CASE REPORTS

Case I—An engine driver aged forty-three complained of pain in his right knee. He gave a history of a twist of unknown direction, and one incident of instability subsequently. There was no history of locking, clicking or effusion. On examination the only abnormality to be found was a loud medial cartilage click in both knees. A precise diagnosis could not be
made and conservative measures were adopted. He continued to complain, however, and five months later he was admitted to hospital with persistent pain, insecurity and frequent clicking. At operation, two days later, a very large discoid medial cartilage was removed. The patient's recovery was uneventful and he was discharged in four weeks.

He reported again the following year complaining of medial pain in the left knee. There was no history of injury, locking, instability or swelling. He presented tenderness over the

medial joint line and a loud painful cartilage click. In view of the findings of the previous operation, operation was undertaken and again revealed an unusually large and disc-shaped medial cartilage.

The specimen removed from the right knee of this patient is abnormally broad, pear-shaped and can be classed as infantile (Fig. 1). It measured 6 by 4 by 1·3 centimetres and showed a transverse tear. It showed also the phenomenon of horizontal cleavage (Fig. 2).
The left medial cartilage followed the same pattern and measured 5.7 by 4 by 1.3 centimetres (Fig. 3). The damage to this cartilage was the same, and both horizontal cleavage and the early stage of an overt tear were evident (Fig. 4).

Case 2—A man of thirty-four, a meter inspector, had complained of recurrent pain and swelling of the right knee for seventeen years. On admission to hospital he gave a recent history of instability and frequent clicking. On examination a tender swelling on the antero-medial aspect was found and a loud medial cartilage click was elicited. At operation a large primitive discoid cartilage was removed.

The specimen measured 5.5 by 4 by 1.2 centimetres and showed horizontal cleavage. Apart from the periphery, the whole of the upper surface had been worn away (Figs. 5 and 6).

**SUMMARY**

1. The occurrence of congenital discoid medial cartilages in two patients is reported: in one the abnormality was bilateral. The three specimens are described and illustrated.
2. The literature on the subject is reviewed and the specimens discussed and classified.

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**REFERENCES**