SYNOVIAL CYSTS AND RUPTURE OF THE KNEE JOINT IN RHEUMATOID ARTHRITIS AN ARTHROGRAPHIC STUDY

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19th century descriptions of cysts in the popliteal region or calf communicating with the knee included those of Adams (1840) and Baker (1877, 1885), and these phenomena are often called Baker's cysts. Baker clearly recognized the possibility of acute rupture occurring in these cysts. Recently Dixon and Grant (1964) have described five patients with rheumatoid arthritis in whom they diagnosed acute synovial rupture of a knee effusion into the calf.

The present paper describes the use of contrast arthrography in studying twenty patients who presented during the past 2 years with either intact cysts of the popliteal region or calf, or synovial rupture of the knee joint or of a popliteal cyst. This method of examination has been used in single patients or in small groups by Beatty (1959), Harvey and Corcos (1960), and Tait, Bach, and Dixon (1965).

Method

Patients were given preliminary sedation. After aspiration of any joint fluid, 10-40 ml. 45 per cent. "Hypaque" (Bayer) were injected over a period of several minutes into the medial side of the knee joint, using an 0.8×38 mm. needle. If no effusion was present, a few ml. of saline were first introduced into the knee under low pressure, thus ensuring that the Hypaque injected afterwards was entering the knee joint. Passage of Hypaque from the knee into a popliteal cyst or into the calf was often facilitated by getting the patient to walk, squat, or exercise the leg.

Contrast medium was injected into the synovial cavity of the knee joint in twenty patients, comprising sixteen with rheumatoid arthritis (classical or definite or A.R.A. classification; Ropes, Bennett, Cobb, Jacox, and Jessar, 1959), three with psoriatic arthritis (sero-negative inflammatory arthritis associated with psoriasis), and one with degenerative joint disease.

Fourteen patients had cysts occupying the popliteal region or calf, four had acute synovial rupture of the knee joint (one of them had a small popliteal cyst which ruptured), and in two the diagnosis remained uncertain.

In three patients with calf cysts and in three others with popliteal cysts, additional contrast medium was injected

directly into the cysts themselves on separate occasions in order to study retrograde flow, if any, from the cyst into the knee joint.

The procedure has not caused any discomfort. A few patients developed a tense effusion in the knee within a few days, but this did not reaccumulate after aspiration.

Results

Popliteal Cysts

Twelve patients (Cases 1 to 12) with cysts in the popliteal region were studied (Table I, opposite).

Case 12 presented with a calf cyst in the opposite leg also and is described in detail in the next section. In Cases 1 and 5 the popliteal cysts were bilateral. In most instances, the cysts caused no symptoms, but in a few they produced discomfort or pain. None of the patients had ever received systemic corticosteroids. Four had received local corticosteroids into the affected knee, one (Case 9) only a week before the popliteal swelling appeared.

No fluid could be aspirated from the knee joint in five of the twelve patients and in two the volume of the effusion was less than 3 ml. An attempt was made to aspirate fluid directly from the cyst in nine patients, but this was successful in only four; in the other five, although no fluid could be drawn into the syringe with a 1.25×38 mm. needle, highly viscous fluid sometimes leaked slowly from the puncture site.

Contrast injected into the knee joint passed into the cyst in all patients, although on a few occasions only after knee exercises. The contrast even entered those cysts from which no fluid could be aspirated, but it then had a tendency to coat their walls rather than to mix homogeneously (Fig. 1, opposite). In Cases 2 and 7 radiographs taken within a few minutes of injection showed contrast passing into regional lymphatics (Fig. 1). In three patients contrast was injected directly into the cyst; in two of them it passed forwards into the knee joint after exercise. In Case 6 (Fig. 2, opposite) the cyst extended upwards into the thigh.

TABLE I
CLINICAL PARTICULARS OF TWENTY CASES

Case No.	Age (yrs)	Sex	Diagnosis*	Duration (yrs)	D.A.T.	Systemic Steroid Therapy	Previous Local Steroid Therapy	Knee Effusion	Oedema Distal to Swelling	Arthrogram (injection into knee)	Fluid Aspirated from Swelling	Retrograde Flow Contrast	Comment
1	55	F	Ps.A.	20	1:8	-	-	-	-	Popliteal Cyst	+	+	Bilateral cysts
2	56	M	R.A.	3	1:512	-	+	-	-	Popliteal Cyst	+	-	
3	78	F	R.A.	5	1:2	-	-	+	-	Popliteal Cyst	+	+	
4	67	M	D.J.D.	2	1:4	-	-	-	-	Popliteal Cyst	+	-	
5	64	M	R.A.	1	1:1	-	-	-	-	Popliteal Cyst	-	-	
6	72	M	R.A.	4	1:2	-	+	+	-	Popliteal Cyst	-	-	
7	52	F	R.A.	6	1:256	-	-	-	-	Popliteal Cyst	-	-	Bilateral cysts Also synovial cyst right shoulder
8	49	F	Ps.A.	14	1:8	-	+	+	-	Popliteal Cyst	-	-	
9	54	M	R.A.	3	1:256	-	+	+	-	Popliteal Cyst	-	-	
10	32	F	R.A.	2	1:1	-	-	+	-	Popliteal Cyst	+	-	
11	20	F	Ps.A.	3	1:4	-	-	+	-	Popliteal Cyst	+	-	
12	62	F	R.A.	9	1:256	-	-	-	-	Left Popliteal Cyst	-	-	Cyst removed
								-	-	Right Calf Cyst	+	-	
13	52	F	R.A.	8	1:2	-	-	+	-	Left Calf Cyst	+	+	Cyst removed
14	64	M	R.A.	18	1:512	+	+	-	-	Left Calf Cyst	+	-	
15	53	F	R.A.	0.5	1:16	-	-	+	-	Synovial Rupture			Rupture of small popliteal cyst
16	68	M	R.A.	1	1:1	-	-	+	+	Synovial Rupture			
17	49	F	R.A.	2	1:16	+	-	+	+	Synovial Rupture			
18	58	M	R.A.	3	1:8	-	+	+	-	Synovial Rupture			
19	67	M	R.A.	26	1:128	+	-	+	-	Diagnosis Uncertain			
20	52	F	R.A.	34	1:1	-	+	+	+	Diagnosis Uncertain			

* R.A. Rheumatoid arthritis
Ps.A. Psoriatic arthritis
D.J.D. Degenerative joint disease

Fig. 1.—Case 7. The contrast has outlined a popliteal cyst, a lymph node (black arrow), and local lymphatic channels (white arrow).

Fig. 2.—Case 6. Popliteal cyst extending upwards into the thigh.

Calf Cysts

Three patients (Cases 12-14) had cysts in the calf

Case 12, a housewife, developed rheumatoid arthritis in 1955 at the age of 53. In 1963 a swelling gradually appeared in the right calf which caused discomfort but no pain.

Examination.—In February, 1964, a swelling was palpable in the calf which showed cross-fluctuation with another in the popliteal fossa. No fluid could be aspirated from the knee. A contrast arthrogram showed a calf cyst with two tongues projecting downwards (Fig. 3). Some days later contrast medium injected into the cyst could not be made to pass back into the knee even after exercise.

Fig. 3.—Case 12. The contrast arthrogram shows a calf cyst with two tongues projecting downwards (arrowed).

Treatment.—The cyst was removed by Mr. W. H. Stephenson. There were several extensions of the cyst into the gastrocnemius muscle. Histology of the cyst wall showed infiltration with lymphocytes and plasma cells. Recovery was delayed by postoperative bronchitis and mild wound sepsis. A year after surgery the cyst had not recurred.

During 1964 a popliteal cyst was found on the left side, from which no fluid could be aspirated. Intra-articular contrast medium entered the cyst only after exercise, and then coated its wall: it did not mix homogeneously.

Comment.—A calf cyst in the right leg was demonstrated by contrast arthrography and was successfully removed. A popliteal cyst later developed in the left leg.

Case 13, a female clerk, developed rheumatoid arthritis in 1956 at the age of 46. In June, 1962, her left calf became acutely painful and swollen after kneeling to clean the floor. The pain settled spontaneously but the swelling gradually enlarged over the following year and caused some discomfort. In July, 1963, she suddenly became unable to move her left knee for a few hours.

Examination.—There was a tense non-tender fluctuant swelling deep in the left calf. No cross-fluctuation between this swelling and an effusion of the knee joint on the same side could be detected; 100 ml. clear yellow fluid were aspirated from the calf swelling, but the fluid reaccumulated within a few days.

A contrast arthrogram with 25 ml. Hypaque showed a channel passing from the synovial cavity into a calf cyst (Fig. 4a, opposite). One week later 40 ml. Hypaque were injected into the cyst, and the contrast medium was seen to pass spontaneously upwards into the knee joint.

Treatment.—In December, 1963, the cyst was removed by Mr. W. H. Stephenson through an S-shaped skin incision. It was lying beneath the deep fascia and its distal part was embedded in the gastrocnemius muscle, so that it was necessary to remove a small portion of this muscle. The neck of the cyst was ligated before division. Examination of the synovium lining the cyst revealed synovial proliferation with underlying infiltration with lymphocytes and plasma cells, an appearance consistent with rheumatoid arthritis (Fig. 4b, opposite).

Recovery from surgery was rapid but a recurrent effusion in the knee has required aspiration and injection of methylprednisolone three times in the ensuing year. In August, 1964, a repeat arthrogram with 40 ml. Hypaque showed a synovial cavity with no gross abnormality (Fig. 4c, opposite).

Comment.—A calf cyst was demonstrated by contrast arthrography and successfully removed, though a knee effusion on the same side has required subsequent aspiration and injection of local corticosteroid on three occasions.

Case 14, a retired labourer, developed rheumatoid arthritis in 1946 at the age of 46. Prednisolone 10 mg. daily was started in 1958. During 1964 the knees became progressively more painful. In February, 1965, sudden pain in the left knee kept him awake at night and steadily increased until his admission to hospital one week later.

Examination.—There was a well-defined tense fluctuant swelling in the calf from which 140 ml. bloodstained fluid were removed. On the next day an attempt to aspirate fluid from the left knee joint was unsuccessful. 20 ml. Hypaque were then injected into the joint. At first this remained in the synovial cavity but after knee exercises the cyst filled with contrast through a narrow channel (Fig. 5a, overleaf) and the knee joint emptied. A few days later a further 40 ml. fluid were removed from the cyst and replaced by an equal volume of contrast medium (Fig. 5b, overleaf).

In an endeavour to see if the fluid would pass upwards

Fig. 4a.—Case 13. Contrast injected into the knee entering a calf cyst through a channel.

Fig. 4b.—Histology of the cyst wall. Haemotoxylin and eosin. $\times 210$.

Fig. 4c.—Postoperative arthrogram.

into the knee, the calf was massaged, as the patient flexed and extended his knee against resistance. A sudden gush of fluid was felt at the top of the cyst which became less tense. It was thought that the upper end of the cyst must have ruptured, and radiographs confirmed the escape of contrast material from its upper end (Fig. 5c, overleaf). None of the Hypaque had passed back

into the knee. Thus an acute synovial rupture had been produced by this manoeuvre. A few days later 120 ml. bloodstained fluid were removed from the cyst and 80 mg. methylprednisolone injected. There were no untoward effects following rupture.

Comment.—Contrast medium passed from the knee

Fig. 5a.—Case 14. Contrast entering a calf cyst through a narrow channel after exercise.

Fig. 5b.—Contrast medium injected directly into the cyst.

Fig. 5c.—Upward rupture of the cyst after exercise.

into a calf cyst after exercise. A later attempt to force contrast material in the opposite direction resulted in synovial rupture from the upper end of the cyst.

Acute Synovial Rupture

Four patients (Cases 15-18) had synovial rupture of the knee joint or of a popliteal cyst with extravasation of fluid into the calf.

Case 15, a 53-year-old female typist, presented in March, 1964, with a 6 month history of polyarthritis. Her left knee had been painful and slightly swollen for 3 days.

Examination.—There was a small effusion in the knee. A few days later, the effusion suddenly disappeared and the left calf became acutely painful and slightly swollen for 3 days. A contrast arthrogram a week later showed no abnormality at rest (Fig. 6a, opposite). The patient was then asked to squat, and a film taken immediately afterwards showed extravasation of contrast medium into the calf (Fig. 6b, opposite). This event was asymptomatic but the patient did complain some hours later of a mild dull pain in the calf lasting for a few days together with slight swelling.

2 weeks later the whole procedure was repeated with an identical sequence of events—i.e. a normal arthrogram at rest and rupture after squatting.

During the succeeding year, the swelling has not recurred, though an effusion in the knee joint itself has required aspiration and injection of methylprednisolone on one occasion.

Comment.—Synovial rupture was twice produced by squatting during the actual procedure of contrast arthrography.

Case 16, a 68-year-old man, developed rheumatoid arthritis in 1963. In December, 1964, an effusion developed in the right knee and 2 weeks later he experi-

enced a sudden pain at the back of the same knee radiating to the calf which became swollen.

Examination.—There was a tender ill-defined swelling of the right calf with oedema of the lower leg. 16 ml fluid were aspirated from the right knee and 20 ml contrast medium were then injected into it. A little was seen to extravasate backwards, much more so after exercise (Fig. 7, overleaf), the contrast passing down the calf in an irregular manner. The calf swelling settled spontaneously in 2 weeks and has not recurred. A needle biopsy of the right knee revealed inflammatory changes typical of rheumatoid arthritis in the synovium.

Comment.—The clinical diagnosis of synovial rupture was confirmed by contrast arthrography.

Case 17, a female factory-worker aged 47, developed rheumatoid arthritis in 1962, and in 1964 treatment was started elsewhere with Betamethasone 1.5 mg. daily. In August, 1964, she was noted to have small bilateral knee effusions and in October, 1964, the right calf became acutely painful and swollen with oedema of the right foot.

Examination.—A tense 6 × 3" swelling on the postero-medial side of the calf was felt a few days later, but the knee joint contained only a trace of fluid.

A contrast arthrogram showed, at rest, a slight extravasation from the posterior border of the synovial cavity. After exercise, the knee joint suddenly became emptied of contrast medium and the swelling in the calf became even more tense. Radiographs then showed extensive penetration of contrast down the calf in two planes. In the deeper tissues of the calf, the fluid could be seen coursing downwards presenting an appearance of

Fig. 6a.—Case 15. Arthrogram at rest.

Fig. 6b.—Arthrogram after exercise, showing extravasation of fluid into the calf.

linear streaking imparted by the muscle fibres with which it was in close contact. Posterior to this fluid was also extending downwards in irregular clumps superficial to the deep fascia. There was also upward extravasation from the suprapatellar pouch.

Over the next few weeks, the swelling in the calf gradually disappeared.

Comment.—Contrast arthrography confirmed synovial rupture in deep and superficial tissue planes.

Case 18, a factory foreman now aged 58, developed rheumatoid arthritis in 1962, and this was treated with phenylbutazone. In February and November, 1964, fluid was aspirated from his right knee and corticosteroid injected. One morning in April, 1965, while walking, he experienced a sudden pain in the right calf which became hard and swollen. Walking was difficult for one week but the symptoms then gradually eased.

Examination.—1 month later the circumferences of the

Fig. 7.—Case 16. Contrast arthrogram, showing extravasation of fluid after exercise.

right knee and calf were found to be one inch greater than on the left side and a small sausage-shaped popliteal cyst was palpable.

A contrast arthrogram at rest showed an enlarged suprapatellar pouch and a popliteal cyst. After squatting, extravasation from the upper end of the cyst was seen on a lateral radiograph.

One week later 20 ml. fluid were removed from the popliteal cyst and 60 ml. from the knee joint.

Comment.—A clinical diagnosis of synovial rupture was confirmed radiologically, extravasation in this case being from the upper end of a popliteal cyst.

Diagnosis Uncertain

In two patients (Cases 19 and 20) the differential diagnosis between an intact calf cyst and synovial rupture remained uncertain.

Case 19, a man now aged 67, developed sero-positive rheumatoid arthritis in 1938. Prednisolone 20 mg. daily was started at another hospital in 1963 because of necrotizing sclero-uveitis.

Examination.—In March, 1965, it was noted that the right calf was 2" greater in circumference than the left with a bulge in the popliteal fossa. The patient had been aware of this difference in size between the two calves for many years but there were varicose veins in the right leg. Attempted aspiration of fluid from the right calf was unsuccessful. 10 ml. fluid were aspirated from the right knee joint and 40 ml. Hypaque injected. A small amount passed into the calf in a discrete localized manner to within a few cm. of the ankle joint. The density of contrast medium was low.

Comment.—It is uncertain whether this was a calf cyst or merely an extravasation from the knee, the fluid being confined in a discrete manner in a deep tissue plane.

Case 20, a housewife, developed rheumatoid arthritis in 1930 at the age of 18. In January, 1964, she had a fall (without injury to the knees) and 2 weeks later the polyarthritis flared up, with the insidious onset of a painful swelling in the left calf.

Examination.—There were bilateral knee effusions, smaller on the left, and a tense but ill-defined swelling of the left calf whose circumference was $\frac{1}{2}$ " greater than the right. The contrast arthrogram revealed extensively localized shadowing in the calf. Over the next few months the swelling slowly subsided but a small bulge could be felt behind the knee.

Comment.—The ill-defined appearance on radiography together with the complete resolution of the calf swelling suggests to us that this was a synovial rupture from the knee joint; however a loculated appearance has been seen in calf cysts (Case 12, Fig. 3), and it is possible that the swelling in this patient was due to fluid in such a cyst.

Discussion

The exact mechanism by which calf cysts develop is uncertain. They appear to be the result of a downward herniation from the knee joint, either directly or via a bursa in the popliteal fossa communicating with the knee joint (Baker, 1885). The tendency to develop such a herniation is understood when it is recalled that pressure within the knee joint, though normally lying between 6 and 33 mm. Hg at rest, can rise ten times as high with muscular contraction (Caughey and Bywaters, 1963) and to as much as 1,000 mm. Hg during exercise (Dixon and Grant, 1964). The forces producing such extension of the synovial cavity are thus the same as those which produce large cystic erosions within medullary bone, a process seen particularly in patients with rheumatoid arthritis who maintain a high level of physical activity (Castillo, El Sallab, and Scott, 1965). The sudden onset of symptoms in Cases 13 and 14 indicates either that herniation and cyst

formation may be rapid, or that an empty cyst may suddenly fill with fluid from the knee. A calf cyst might be present for many years and then, with a flare-up of arthritis, suddenly distend with fluid. The neck of these cysts has been shown by our arthrograms to be narrow and sometimes tortuous. A valvular mechanism may operate in some instances: in Case 13 it was possible to massage contrast medium in both directions but in Cases 12 and 14 the fluid could be forced in a downward direction only.

Calf cysts are usually described in rheumatoid arthritis only (Beatty, 1959; Harvey and Corcos, 1960; Maudsley and Arden, 1961) but several of Baker's cases probably had tuberculosis of the knee joint (Maudsley and Arden, 1961).

In our patients, most of whom had rheumatoid arthritis, a communication between popliteal cysts and the knee joint could always be demonstrated by arthrography; but, in children especially, cysts may arise from popliteal bursae which are said not to communicate with the joint, and disease of the knee joint need not be present (Gristina and Wilson, 1964). However, contrast arthrography can demonstrate a communication with the knee joint which might not otherwise be diagnosed, since often there is no joint effusion. Calf cysts probably always communicate with the joint, although this too may only be detected by arthrography (*e.g.* Case 14).

High pressure within the knee joint can also produce synovial rupture with extravasation of fluid into the calf. This occurred in Cases 15 to 18, and has been fully discussed by Dixon and Grant (1964), together with experimental observations on normal subjects and cadavers in which intrasynovial pressure was raised by the injection of plasma. These authors commented on the widespread painful inflammatory oedema produced by escape of rheumatoid synovial fluid into the tissues, which contrasted with the bland effect of plasma under experimental conditions in normal subjects.

The factors which determine whether a synovial

joint lining will blow out into a cyst or rupture are not understood, but Dixon and Grant noted that synovial rupture occurred early in the history of knee involvement in any patient with rheumatoid arthritis. Our experience tends to confirm this, the duration of arthritis in Cases 15, 16, and 17, all of whom had definite rupture of the knee joint, being 0.5, 1, and 2 years respectively. In Cases 12, 13, and 14, on the other hand, who were shown to have cysts in the calf, the total disease duration was 9, 8, and 18 years. In Cases 19 and 20, the patients in whom we were uncertain which of the two conditions had occurred, the disease duration was 26 and 34 years. This would perhaps suggest that their lesions were calf cysts.

There are three causes of calf swelling in patients with rheumatoid arthritis:

- (1) An intact synovial cyst in the calf,
- (2) Acute rupture of the knee joint or of a synovial cyst with extravasation of fluid,
- (3) Deep venous thrombosis, which is occasionally seen in the legs of patients with rheumatoid arthritis, though it is probably no more common in this condition than in other chronic diseases in which the patient may spend some time in bed.

The necessity of distinguishing between calf cysts and thrombophlebitis has been clearly recognized (Harvey and Corcos, 1960; Good, 1964), but the differential diagnosis between intact calf cysts and synovial rupture of the knee joint has not previously been emphasized. The distinction between these two conditions is, however, of practical importance in management.

The points in the differential diagnosis between calf cysts, synovial rupture, and thrombophlebitis are summarized in Table II, though there are doubtless individual exceptions, or combinations of the three conditions. We have not encountered an unequivocal example of spontaneous rupture of a calf cyst (the rupture in Case 18 was from a cyst

TABLE II
DIFFERENTIAL DIAGNOSIS OF CALF SWELLINGS

Diagnostic Features	Calf Cysts	Synovial Rupture of the Knee Joint	Thrombophlebitis
1. Pyrexia	-	-	±
2. Onset of swelling	Variable	Sudden	Over some hours (if any)
3. Pain	+	++	+
4. Calf swelling	Well-defined	Ill-defined	Ill-defined
5. Oedema	±	+	+
6. Knee effusion	+	±	-
7. Fluid on aspiration of calf swelling	+	±	-
8. Intra-articular contrast	Well-defined	Irregular	Resolution
9. Natural course	Persistence	Resolution	

occupying the popliteal fossa). There seems no reason, however, why this should not occasionally happen and indeed it did so during arthrography in Case 14. Spontaneous rupture of a calf cyst appears to have occurred in Cases 5 and 6 of the patients with Baker's cysts and calf swelling described by Good (1964). In such an event there will be evidence of the cyst remaining after the signs of acute rupture have subsided.

Management

Popliteal cysts are often painless and rarely require treatment once the patient is made aware of the benign nature of the condition. It should be explained that pains about the knee joint may be due rather to arthritic changes than to the cyst itself. Aspiration of fluid followed by injection of corticosteroid and an elastic knee support have been helpful in a few patients. We have had no experience of the surgical treatment of popliteal cysts which has been discussed by Campbell (Crenshaw, 1963).

Calf cysts may be treated conservatively in the same manner, but removal is often indicated because of the discomfort they cause (Beatty, 1959; Harvey and Corcos, 1960; Maudsley and Arden, 1961). Recurrence after surgery is said to be common but has not occurred in our two patients during their first postoperative year (Cases 12 and 13). Case 13, however, has had a recurrent effusion in the same knee and it may be that such cases would do better if simultaneous knee joint synovectomy were performed.

A knee effusion should never be allowed to persist after operation for removal of a cyst, since a high pressure is then exerted on the suture line on exercise; regular intra-articular steroid therapy may prove necessary.

Unlike the swelling caused by calf cysts, that produced by synovial rupture of the knee joint resolves spontaneously and usually no treatment appears to be necessary beyond a few days' rest.

Summary

Twenty patients with popliteal cysts, with cysts from the calf arising from the knee joint, or with synovial rupture from a knee joint have been examined by contrast radiography. Nineteen of the patients had rheumatoid or psoriatic arthritis; the other had degenerative joint disease.

Twelve patients had popliteal cysts (one of them with a calf cyst in the opposite leg). In all of them

it was possible to demonstrate the passage of contrast material from the knee backwards into the cyst, although the knee itself did not contain fluid in five cases.

Three patients had calf cysts demonstrated by arthrography and successful removal was undertaken in two of them. In one of these patients the cyst ruptured during the procedure of arthrography but this accident was harmless. There were no other complications of arthrography.

Four patients were studied following acute synovial rupture and extravasation of fluid from the knee joint or from a popliteal cyst, confirmed radiologically. In two further cases, the differential diagnosis between a calf cyst and synovial rupture remained doubtful.

The mechanism of calf cyst formation and synovial rupture is discussed and the differential diagnosis between these two conditions and thrombophlebitis is tabulated. Popliteal cysts rarely require treatment and synovial rupture of the knee joint resolves after a few days' rest. Calf cysts may need to be removed

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Les kystes synoviaux et la rupture de l'articulation du genou dans l'arthrite rhumatoïdale. Une étude arthrographique

RÉSUMÉ

On a examiné par la radiographie de contraste 20 malades présentant des kystes poplités, des kystes du mollet tirant leur origine de l'articulation du genou et la rupture de la synoviale du genou. Dix-neuf d'entre eux étaient atteints d'arthrite rhumatoïdale ou d'arthrite psoriasique et le vingtième souffrait d'une maladie dégénérative articulaire.

Douze malades avaient des kystes poplités (un d'entre eux en avait un dans le mollet de l'autre jambe). Chez tous les douze on a pu mettre en évidence le passage du milieu de contraste du genou vers le kyste en arrière, bien que, dans cinq cas, le genou lui-même ne contienne pas de liquide.

Chez trois malades on a pu mettre en évidence les kystes du mollet par l'arthrographie et chez deux d'entre eux il a été possible de les enlever. Chez un d'entre eux le kyste s'est rompu au cours de l'arthrographie, sans faire du mal au malade. Il n'y avait pas d'autres complications de l'arthrographie.

On a étudié quatre malades après une acute rupture synoviale et l'épanchement du liquide de l'articulation du genou ou du kyste poplité, tout cela confirmé radiologiquement. En deux autres cas le diagnostic différentiel entre un kyste du mollet et une rupture synoviale était douteux.

On discute le mécanisme de la formation du cyste du mollet et de la rupture synoviale et on indique le diagnostic différentiel entre ces deux conditions et la thrombophlébite. Les kystes poplités ont rarement besoin de traitement et la rupture synoviale au genou se rétablit après quelques jours de repos. Les kystes du mollet peuvent exiger l'ablation.

Los quistes sinoviales y la rotura de la articulación de la rodilla en la artritis reumatoide. Estudio artrográfico.

SUMARIO

Se examinaron por radiografías de contraste veinte enfermos con quistes poplíteos, quistes de la pantorrilla tomando origen en la articulación de la rodilla y con una rotura de la sinovia de la rodilla. Diecinueve de estos enfermos padecieron de artritis reumatoide o de artritis psoriásica y el último sufrió de una enfermedad articular degenerativa.

Doce enfermos tuvieron quistes poplíteos (uno de ellos tuvo un quiste en la pantorrilla del lado opuesto). En la totalidad de estos doce enfermos se pudo demostrar un pasaje del medio de contraste desde la rodilla atrás hacia el quiste aunque, en cinco casos, no hubo líquido en la rodilla misma.

En tres enfermos se pudo evidenciar los quistes de la pantorrilla artrográficamente y en dos de ellos se las pudo extirpar. En uno de estos enfermos la rotura del quiste sobrevino en el curso de la artrografía, sin hacerle daño. No hubo otras complicaciones de la artrografía.

Se estudiaron cuatro enfermos con rotura sinovial aguda y derrame del líquido de la articulación de la rodilla o del quiste poplíteo, confirmado radiológicamente. En dos casos hubo duda respecto al diagnóstico diferencial entre un quiste de la pantorrilla y una rotura sinovial.

Se discute el mecanismo de la formación del quiste de la pantorrilla y de la rotura sinovial y se indica el diagnóstico diferencial entre estas condiciones y la tromboflebitis. Es raro que los quistes poplíteos necesiten tratamiento y la rotura sinovial de la rodilla mejora con unos pocos días de descanso. Los quistes de la pantorrilla pueden necesitar ablación.