



## Original article

ACTA FAC. MED. NAISS. 2004; 21 (4): 231-236

Jelena Jovanović<sup>1</sup>, Vlado Skakić<sup>1</sup>,  
Zorica Marković<sup>1</sup>,  
Vladimir Jovanović<sup>2</sup>

<sup>1</sup> The Institut for Prevention, Treatment and Rehabilitation of Rheumatic and Cardiovascular Diseases "Niška Banja"

<sup>2</sup> The Clinic for Orthopaedics and Traumatology, Clinical Center-Niš

## THE FREQUENCY OF BAKER CYST IN RHEUMATOID ARTHRITIS

### SUMMARY

The objective of this study was to estimate the frequency of Baker cyst in patients with rheumatoid arthritis (RA), using of ultrasonography. We estimate 124 patients with RA, which filled ACR criteria, during stationary treatment and examination at the Rheumatology Department at the Institute Niška Banja. In all patients, ultrasonographic examination was performed with the Acuson Sequoia, with the linear sound of 8MH in order to prove it. The patients were divided into two groups: the group with knee arthritis (82 patients - 66.12%) and the group without knee arthritis (42 patients - 33.88%). In the group of patients with knee arthritis, Baker cyst was found in 54 patients (65.85%), and in the group without knee arthritis it was found in 15 (35.70%) patients. At the same time, in the group with knee arthritis 6 male and 48 female patients had Baker cyst. Average age of patients with knee arthritis and Baker cyst was  $55.43 \pm 9.84$  and with knee arthritis and without Baker cyst  $53.21 \pm 10.06$ . In patients with Baker cyst average duration of the disease was  $8.54 \pm 6.31$ , and in patients without Baker cyst it was  $9.66 \pm 7.23$  years. In relation to the disease activity, 32 (39.0%) patients with high activity, 21 (25.6%) with moderate and 1 with mild activity had Baker cyst. In relation to the disease stage, 11 (13.4%) patients in IV, 26 (31.7%) in III, 16 (19.5%) in II and 1 in I anatomical stage had Baker cyst. In 36 (66.67%) patients with Baker cyst joint knee arthrosis was found. In relation to presence of rheumatoid faktor (RF), 39 (47.6%) patients with Baker cyst were IgM-RF(+), and 15 (18.3%) IgM-RF(-). The result also showed that 34 (41.4%) patients with Baker cyst had positive finding of C-reactive protein (CRP), and that in 20 (24.4%) patients CRP was negative.

According to our result, Baker cyst is more frequent in patients with actually present knee joint arthritis, in patients with high and moderate activity of the rheumatoid process, in the II and III anatomical stage, patients with jointed knee arthrosis, as well as in patients with positive finding of IgM-RF and C reactive protein.

**Key words:** rheumatoid arthritis, Baker cyst, arthritis knee, ultrasonography

### INTRODUCTION

Popliteal or Baker's cyst (1) represents fluid distention of a bursa between the gastrocnemius and semimembranosus tendons via a communication with the knee joint. Although called the gastrocnemiosemimembranosus bursa, it represents a composite of two bursae: a bursa anterior to the medial gastrocnemius tendon (the subgastrocnemius bursa) and

a bursa between the tendons of the gastrocnemius and semimembranosus tendons. Baker's cysts may be seen with many joint abnormalities, such as internal derangement, osteoarthritis, or inflammatory arthritis; the most common associations include joint effusion, meniscal tear, and degenerative joint disease (2). In 1877, Baker described 8 cases of periarticular cysts caused by synovial fluid that had escaped from the knee joint and formed a new sac outside the joint.

## Epidemiology

No racial and no sex predilection exists. Popliteal cysts appear much less frequently in children than in adults.

## Prevalence

Prevalence of Baker Cyst Based on Diagnostic Modalities: MRI 5–18%, Cadaveric dissections 30%, Arthroscopy 37%, Ultrasound 40–42%, Arthrography 5–46%.

Prevalence of Baker Cyst Based on patient populations: In the patients with RA 5–58%, in the patients with osteoarthritis 42%, and Internal derangements 5–18% (L.T. Bui-Mansfield, 2001).

## Pathophysiology

A Baker cyst is a synovial cyst located posterior to the medial femoral condyle between the tendons of the medial head of the gastrocnemius and semimembranosus muscles. This usually communicates with the joint via a slitlike opening at the posteromedial aspect of the knee capsule just superior to the joint line. A Baker cyst is lined by a true synovium, as it is an extension of the knee joint. Popliteal cysts range from 1–40cm<sup>3</sup> (median 3cm<sup>3</sup>).

A popliteal cyst may serve as a protective mechanism for the knee. Intrinsic intra-articular disorders cause joint effusion. The knee effusion is displaced into the Baker cyst, thus reducing potentially destructive pressure in the joint space. Jayson and Dixon postulated that joint effusion and fibrin are pumped from the knee joint into the popliteal cyst but not in the reverse direction because of a valve-like communication, such as either a ball or Bunsen valve).

In the ball-valve mechanism, effusion is pumped from the knee joint into the Baker cyst, but fibrin serves as a one-way valve blocking return of effusion into the knee joint. In the Bunsen-valve mechanism, the enlarging Baker cyst exerts mass effect on the slitlike communication between the joint and cyst, trapping effusion. Trapped effusion is reabsorbed through the semipermeable membrane, leaving behind concentrations of fibrin. This explains the difficulty aspirating the thick, glutinous contents of these cysts. Rauschnig and Lindgren (3) studied 41 patients with popliteal cysts via arthrography, arthroscopy, or arthrotomy. Their study suggested that Baker cysts may form by 2 mechanisms:

– A primary or idiopathic cyst has a valvular connection with the joint cavity. Membranes, synovial bands, and folds were seen in all valvular cases. Scarring and irritation may form these folds.

Alternatively, the synovial bands may be remnants of connective tissue interposed between the joint and bursal cavity. Idiopathic cysts usually are seen in young patients without symptoms. Cyst contents usually are viscous.

– A secondary or symptomatic cyst communicates freely with the knee joint and contains synovial fluid of normal viscosity. Secondary cysts reveal underlying articular disorder, which was demonstrated in 14 of 41 patients (34%) with popliteal cysts. Associated articular disorders included osteoarthritis, rheumatoid arthritis (RA), psoriatic arthritis, nonspecific synovitis, meniscal tears, and chondromalacia patellae Symptoms of Baker Cyst: From a study by Brayan et al (4) the most common symptoms in patients with Baker Cyst were: Popliteal mass or swelling 76%, Aching 32%, Knee effusion 32%, Thrombophlebitis 13%, Clicking of the knee 11%, Buckling of the knee 11%, Locking of the knee 3%.

The diagnosis of Baker cyst after the clinical examination, to fill with next diagnostic method:

Conventional radiography (5) imaging evaluation of a popliteal mass begins with conventional radiography to detect a soft tissue mass, calcifications, and bony involvement. Baker cyst appears as a soft tissue mass in the posteromedial knee joint. Occasionally, a popliteal cyst is suggested by the presence of multiple calcified loose bodies within the cyst Rarely, a solitary loose body within a popliteal cyst may mimic a fabella on a lateral radiograph of the knee.

Arthrography is more sensitive than ultrasonography (US) in detecting popliteal cysts. In 24 patients with possible Baker cyst, US detected 19 cysts in 48 knees (40%), while arthrography demonstrated 22 cysts (46%). The increased sensitivity of arthrography is probably the result of its ability to distend the bursa.

US (6-8) is a very helpful imaging technique in the evaluation of a popliteal mass. US determine whether the popliteal mass is a cyst or solid mass. A simple Baker cyst appears as an anechoic mass with posterior acoustic enhancement that communicates with the knee joint. Findings on US relate to the criteria of a simple cyst, which include an anechoic mass, sharply defined posterior wall, and posterior acoustic enhancement. A complex popliteal cyst has internal echoes within the hypoechoic mass). Calcified loose bodies within a Baker cyst appear as mobile intraluminal echogenic foci with distal acoustic shadowing, an appearance similar to that of cholelithiasis within a gallbladder. An additional advantage of US is that it can exclude a coexisting deep venous thrombosis (DVT).

Color Doppler can detect vascular flow within the mass to exclude a popliteal artery aneurysm. In

cystic adventitial degeneration of the popliteal artery, US examination reveals multiple cystic structures surrounding a normal-sized artery.

On CT (9) Baker cyst appears as a fluid-containing mass located behind the medial femoral condyle and between the tendons of the medial head of the gastrocnemius and semimembranosus muscles. A space-occupying lesion in the posteromedial knee suggests the diagnosis but is not always sufficient to exclude other etiologies, for which MR or US is more specific.

On MRI (10) a Baker cyst appears as a homogeneous high signal intensity cystic mass behind the medial femoral condyle, and a thin fluid-filled neck interdigitates between the tendons of the medial head of the gastrocnemius and semimembranosus muscles.

Differential diagnosis Baker cyst:

Other Problems to be Considered: Vascular masses, Soft tissue tumor: Benign and Malignant.

#### Complications

Potential complications of Baker cyst reported in the medical literature are as follows: Pseudothrombophlebitis syndrome (rupture, dissection), DVT, pulmonary embolism, hemorrhage, leaking, infection, posterior compartment syndrome and trapped calcified body.

#### Intervention

Treatment of popliteal cysts is conservative, including nonsteroidal anti-inflammatory agents, ice, and assisted weight bearing, in addition to correction of underlying intra-articular disorders. Internal derangements of the knee can be treated with therapeutic arthroscopy. Total knee arthroplasty is reserved for severe osteoarthritis. Radioactive synoviorthosis can treat inflammatory arthritides and hemophilia.

#### THE AIM

The objective of this study was to estimate the frequency of Baker cyst in patients with rheumatoid arthritis (RA), using the ultrasonography

#### METHODOLOGY

124 patients with RA ( which filled ACR criteria ) were involved, during stationary treatment and examination at the Rheumatology Department at the Institute Niška Banja. In patients who after the clinical

examination had suspected Baker Cyst, ultrasonographic examination was performed with the apparatus Acuson Sequoia, with the linear sound of 8 MH in order to prove it.

Patients were divided into two groups: the group with knee arthritis 82 (66.12%) and the group without knee arthritis 42 (33.88%). In the group with knee arthritis were 73 (89%) female and 9 (11%) male patients, and average age was  $55.28 \pm 9.44$ . In the group without knee arthritis were 37 (88%) female and 5 (12%) male patients, and average age was  $53.48 \pm 9.95$ . Patients with knee arthritis were divided into four anatomical stage disease to Steinbrocker, as well as in relation to the disease activity: non-activity, mild, moderate and high activity.

Patients were divided too, in relation to presence or absence rheumatoid factor IgM class (RF) and C-reactive protein (CRP).

#### RESULTS

124 patients with RA were involved, knee arthritis was found in 82 patients (66.12%), and in patients without knee arthritis in was found in 42 patients (33.88%). In the group of patients with knee arthritis, Baker cyst was found in 54 (65.85%) patients (table 1), and in the group without knee arthritis it was found in 15 (35.70%) patients (table 2). At the same time in the group with knee arthritis were 6 (11.11%) male and 48 (88.89%) female patients had Baker cyst, and in the group without knee arthritis were 15 (35.70%) female. According to our results, Baker cyst is significant frequent in patients with RA and actually pleasant knee arthritis in relations in the group without knee arthritis, with high statistical significance ( $p=0.003$ ) (table 3).

Table 1. The Frequency of Baker cyst in patients with RA and knee arthritis

Baker cyst	Number	%
Present	54	65.85
Absent	28	34.15
Total	82	100.0

Table 2. The Frequency of Baker cyst in patients without knee arthritis

Baker cyst	Number	%
Present	15	35.70
Absent	27	64.30
Total	42	100.0

Table 3. Relation between the frequency of Baker cyst in patients with and without knee arthritis

Baker cyst	Knee arthritis				Total
	Present	%	Absent	%	
Present	54	43.55*	15	12.10	55
Absent	28	22.55	27	21.80	69
Total	82	66.10	42	33.90	124

$\chi^2=9.04, *p=0.003$

\*connection between Baker cyst and knee arthritis.

Average age of patients with Baker cyst and knee arthritis was  $55.43 \pm 9.84$  and without Baker cyst  $53.21 \pm 10.06$  years. In patients with Baker cyst and knee arthritis average duration of disease was  $8.54 \pm 6.39$ , and in patients without Baker cyst it was  $9.66 \pm 7.23$  years. Comparable group were homogeneous in relation to the average age as well as to the average duration of disease.

In relation to the disease activity, our results show in the group with knee arthritis Baker cyst had 32 (39.0%) patients with high activity, 21 (25.6%) with moderate and 1 with mild activity.

According our results Baker cyst is more frequently in high more moderate and mild activity, with high statistical significance ( $p=0.015$ ), (table 4).

When we talk about disease stage, in the group of knee arthritis Baker cyst had 11 patients in IV (13.4%), 26 (31.7%) in III, 16 (19.5%) in II and 1 in I anatomical stage. From our results, we concluded that is presence Baker cyst high statistically significance ( $p=0.015$ ) in III, as well as in II anatomical stage, table 5.

Table 5. Relation between Baker cyst and anatomical stage disease in patients with knee arthritis

Baker cyst	Anatomical stage								Total	
	I		II		III		IV			
	N°	%	N°	%	N°	%	N°	%		
Present	1	1.2	16	19.5*	26	31.7*	11	13.4	54	65.8
Absent	1	1.2	16	19.5	3	3.7	8	9.8	28	34.2
Total	2	2.4	32	39	29	35.4	19	23.2	82	100

$\chi^2=8.424, p=0.015$

\*connection between Baker cyst and anatomical stage disease

Table 6. Relation between Baker cyst and presence of RF in patients with knee arthritis

Baker cyst	RF				Total
	Positive		Negative		
Present	39	47.6	15	18.3	54
Absent	15	18.3	13	15.8	28
Total	54	65.9	28	34.1	82

$\chi^2=7.06, p=0.007$

\*connection between Baker cyst and RF

Table 4. Relation between Baker cyst and the disease activity in patients with RA and knee arthritis

Baker cyst	Disease activity						Total
	Mild	%	Moderate	%	High	%	
Present	1	1.22	21	25.6	32	39.0	54
Absent	3	3.66	17	20.7	8	9.68	28
Total	4	4.88	38	46.44	40	67.94	82

$\chi^2=8.424, p=0.015$

\*connection between Baker cyst and disease activity.

The frequency Baker cyst joint knee arthrosis in patients with knee arthritis was analyzed too. In 36 (66.67%) patients with Baker cyst joint knee arthrosis was found. Our results show that presence knee arthrosis increase

Frequency Baker cyst, but non statistical significance ( $p=0.396$ )

In relation to presence of RF 39 (47.6%) patients with Baker cyst were RF(+), and 15 (18.3%) RF(-), with high statistical significance ( $p=0.007$ ), (table 6). Our results show to important presence RF in appear Baker cyst in patients with RA and knee arthritis actually.

The results also showed that 34 (41.4%) patients with Baker cyst had positive finding of CRP, and that in 20 (24.4%) patients CRP was negative, with high statistical significance ( $p=0.035$ ), (table 7). Receive results show to influence presence CRP for more frequency appear Baker cyst in patients with RA and knee arthritis actually.

Table 7. Relation between Baker cyst and presence of CRP in patients with knee arthritis

Baker cyst	CRP				Total
	Positive		Negative		
Present	34	41.4*	20	24.4	54
Absent	20	24.4	8	9.8	28
Total	54	65.8	28	34.2	82

$\chi^2=4.46, p=0.035$

\*connection between Baker cyst and CRP

## DISCUSSION

Medical conditions associated with popliteal cysts, in descending order of frequency, are as follows: Arthritides: Osteoarthritis, RA, Juvenile RA, GOUT, Reiter syndrome, Psoriasis, Systemic lupus erythematosus, as well as Internal derangement (meniscal tears, anterior cruciate ligament [ACL] tears, osteochondral fractures), Infection, Chronic dialysis, Hemophilia, Hypothyroidism, Pigmented villonodular synovitis and Sarcoidosis.

Arthritis is the most common condition associated with Baker cyst. In 99 consecutive patients with RA, Andonopoulos et al. (11) demonstrated Baker cysts on US in 47 patients (48%). Twenty patients (20%) had bilateral cysts. Of 198 patients' knees, 67 (34%) had popliteal cysts, yet only 29 cysts (43%) were diagnosed clinically.

US is a very helpful imaging technique in the evaluation of a popliteal mass (1). US determines whether the popliteal mass is a cyst or solid mass. A simple Baker cyst appears as an anechoic mass with posterior acoustic enhancement that communicates with the knee joint. Findings on US relate to the criteria of a simple cyst, which include an anechoic mass, sharply defined posterior wall, and posterior acoustic enhancement (8). A complex popliteal cyst has internal echoes within the hypoechoic mass. Calcified loose bodies within a Baker cyst appear as mobile intraluminal echogenic foci with distal acoustic shadowing, an appearance similar to that of cholelithiasis within a gallbladder. An additional advantage of US is that it can exclude a coexisting DVT.

According to our results Baker cyst was present in 54 patients (65.85%) who suffered from knee arthritis, and Baker cyst was absent in 28 patients (34.15%). In group without knee arthritis Baker cyst was found in 15 cases (35.7%), it was absent in 27 patients (64.3%). Our results show that Baker cyst is more frequent in patients with RA and knee arthritis comparing with group without knee arthritis with statistically high significance  $p=0.003$ . In its course RA goes through periods of remission and exacerbation, or disease is persistently active. With clinical assessment it can be proved whether disease is in

noactive phase, phase of small, or high activity. Our results showed that Baker cyst was present in group with knee arthritis in 32 patients with high activity (39.0%), 21 with moderate activity (25.6%) and 1 with mild activity. According to our results we can finally conclude that Baker cyst is more often in moderate and mild activity with high statistical significance ( $p=0.015$ ).

We report that radiologic stadium RA can have influence on frequency of Baker cyst appearance. Baker cyst was noticed in 11 patients who were classified to be in IV stadium (13.4%), 26 in III (31.7%), 16 in II (19.5%) and 1 in I anatomic stadium. Analysing our results we can conclude presence of Baker cyst is very statistically high in III and II stadium of illness ( $p=0.015$ ).

Increased value of RF is one of the accepted criterium for making RA diagnosis. RF is pathogenetically and quantitatively the most important autoantibodies in RA (Winchester R, 1995). We found RF+ in 39 patients with Baker cyst (47.6), in 15 patients RF was absent (18.3%), this difference was statistically significant ( $p=0.007$ ) it is proven significance of RF presence in appearance of Baker cyst in patients who suffer from RA and with knee arthritis. In our work we found 34 patients with Baker cyst with positive CRP (41.4%) but only 20 patients (24.4%) with negative finding what is statistically significant ( $p=0.0035$ ). CRP exists in small quantity in every organism and its concentration increase after tissue injury. Thoroughly function of CRP in active phase of response it is not known, but this protein are proved to have influence on inflammation (12).

## CONCLUSION

Our results showed that the Baker cyst is more frequent in patients with actually present knee joint arthritis, in patients with high and moderate activity of the rheumatoid process, in the II and III anatomical stage, patients with joined knee arthrosis, as well as in patients with positive finding of IgM-RF and C reactive protein.

## REFERENCES

1. Skakić V, Stamenković B. Bakerova cista – Ultrasonografska analiza. *Balneoclimatologia* 1999; 23 (2): 17–19.
2. Ward EE, Jacobson JA, Sseffel DP, Hays CW and Holsbeck M. Sonographic detection of Baker's cyst comparison with MRI. Presented at the annual meeting of the American Roengen Ray Society. San Francisco, 1998.
3. Rauschnig W, Linnegren PG. The clinical significance of the valve mechanism in communicating cysts. *Arch Orthop Trauma Surg* 1979; 95: 251–256.
4. Bryan RS, DiMichele JD, Ford GL Jr. Popliteal cysts. Arthrography as an aid to diagnosis and Orthop 1967 Jan-Feb; 50: 203–208.
5. Jablanović D. Konvencionalne metode vizuelizacije u reumatologiji, *Acta rheumatologica Belgrade* 2000, broj 2: 101–109.
6. Fam AG, Wilson SR, Holmberg S. Ultrasound evaluation of popliteal cysts on osteoarthritis on Rheumatol 1982 May–Jun; 9 (3): 428–434 (Medline).

7. Radunović G. Primena ultrazvuka muskuloskeletnih struktura u reumatologiji, *Acta rheumatologica Belgradensia* 2000; broj 2: 110–118.

8. Skakić V. Ultrazvuk u reumatologiji. *Balneoclimatologia*. Supl 1, Savremena dijagnostika u reumatologiji, 2002; vol 26, 19–26.

9. Petković G i sar. Kompjuterizovana tomografija muskuloskeletnog sistema, *Acta rheumatologica Belgradensia*, 2000, broj 2, 124–129.

10. Poleksić Lj, Bačić G. Magnetna rezonancija u reumatskim oboljenjima, *Acta rheumatologica Belgradensia*. 2000, broj 2: 130–135.

11. Andonopoulos AP, Yarmenits S, Sfountouris H. Bakers cyst in rheumatoid arthritis: an ultrasonography study with a high resolution technique. *Clin Exp Rheumatol* 1995 Sep-Oct; 13(5): 633–666 (Medline).

12. Marković Z: Reaktanti akutne faze inflamacije u dijagnostici reumatskih bolesti *Balneoclimatologia*, Supl 1, Savremena dijagnostika u reumatologiji, 2002, vol 26, 159–167.

## UČESTALOST BEKEROVE CISTE U REUMATOIDNOM ARTRITISU

Jelena Jovanović<sup>1</sup>, Vlado Skakić<sup>1</sup>, Zorica Marković<sup>1</sup>, Vladimir Jovanović<sup>2</sup>

<sup>1</sup> *Institut za prevenciju, lečenje i rehabilitaciju reumatičkih i kardiovaskularnih bolesti "Niška Banja"*  
<sup>2</sup> *Klinika za ortopediju i traumatologiju, Klinički centar Niš*

### SAŽETAK

Cilj rada se odnosio na procenu učestalosti Bekerove ciste u pacijenata sa reumatoidnim artritisom (RA), primenom ultrasonografije.

Ispitivanjem je obuhvaćeno 124 pacijenata sa RA, tokom stacionarnog lečenja i ispitivanja u Reumatološkom odeljenju u Institutu "Niška Banja", sa ispunjenim ARA kriterijumima. Kod pacijenata kod kojih je nakon kliničkog pregleda, postavljena mogućnost prisustva Bekerove ciste, urađen je ultrasonografski pregled aparatom Acuson Sequoia, korišćenjem linearne sonde od 8 MHz radi njenog potvrđivanja. Pacijenti su podeljeni u 2 grupe: grupa sa artritisom kolena (82 pacijenta – 66.13%) i grupa bez artritisa kolena (42 pacijenta – 33.87%). Analizirani su rezultati i izvršena je statistička značajnost prisustva Bekerove ciste u bolesnika sa artritisom kolena u odnosu na pol, godine starosti, stadijum i aktivnost bolesti kao i u odnosu na prisustvo artroze i pozitivnost nalaza RF i CRP u serumu.

Prosečna starost pacijenata sa Bekerovom cistom bila je  $55.43 \pm 9.84$  a bez Bekerove ciste  $53.21 \pm 10.06$  godina. Kod pacijenata sa Bekerovom cistom prosečno trajanje bolesti bilo je  $8.54 \pm 6.39$ , a kod pacijenata bez Bekerove ciste  $9.66 \pm 7.27$  godina.

U grupi pacijenata sa artritisom kolena, Bekerova cista je pronađena u 54 pacijenta (65.85%), a u grupi bez artritisa kolena u 15 (35.70%) pacijenata.

Pri tome je u grupi sa artritisom kolena Bekerovu cistu imalo 6 pacijenata muškog (11.11%) i 48 (88.89%) ženskog pola. U odnosu na aktivnost bolesti, Bekerovu cistu je imalo 32 pacijenta (39.0%) sa visokom aktivnošću, 21 (25.6%) sa umerenom i 1 sa blagom aktivnošću. U odnosu na stadijum bolesti, Bekerovu cistu je imalo 11 (13.4%) pacijenata u IV, 26 (31.7%) u III, 16 (19.5%) u II i 1 u I anatomskom stadijumu. Kod 36 pacijenata sa Bekerovom cistom (66.67%) pronađena je i pridružena artroza kolena. U odnosu na prisustvo reumatoidnog faktora (RF), 39 pacijenata (47.6%) sa Bekerovom cistom bilo je IgM-RF(+), a 15 (18.3%) IgM-RF(-). Rezultati su pokazali takođe da su 34 pacijenta (41.4%) sa Bekerovom cistom imali pozitivan nalaz C-reaktivnog proteina (CRP), a da je kod 20 pacijenata (24.4%) CRP bio negativan.

Na osnovu naših rezultata, Bekerova cista je češća kod bolesnika sa aktuelno prisutnim artritisom kolenskog zgloba, kod bolesnika sa visokom i umerenom aktivnošću reumatoidnog procesa, u II i III anatomskom stadijumu, kod bolesnika sa pridruženom artrozom kolena, kao i kod bolesnika sa pozitivnim nalazom IgM-RF i C-reaktivnog proteina u serumu.

**Ključne reči:** reumatoidni artritis, Bekerova cista, artritis kolena, ultrasonografija