

SUPPLEMENTARY MATERIAL

Supplementary Material

Table i. Additional patient data: full report of calprotectin test findings, organisms isolated from culture and details of procedure, past history of inflammatory illness, and other recorded patient variables

Study no.	Isolated organisms (number of samples isolated from)	Calprotectin test risk category	Calprotectin value, mg/l	Sex	Age, yrs	BMI, kg/m ²	Left or right	Time since original implant	Indication for operation	Procedure	Past medical history
1		mild	0.00	F	80	31.5	R	> 1 yr	metal-on-metal wear	TKA	RA
2		mild	0.00	F	79	22.1	R	> 1 yr	aseptic loosening	THA	RA
3		mild	0.00	M	80	32.0	R	> 1 yr	aseptic loosening	THA	N
4		severe	288.72	M	76	30.3	R	> 1 yr	femoral lysis	TKA	N
5	<i>Collinsella aerofaciens</i> (1)	severe	134.80	M	71	31.9	R	> 1 yr	metal-on-metal - infection	THA - 1st stage	T2DM
6		mild	3.93	F	81	25.9	R	> 1 yr	dislocation and stem fracture	THA	CLL
7		mild	0.00	M	71	27.1	L	> 1 yr	metal-on-metal loosening	THA	N
8		mild	0.00	M	67	26.3	R	> 1 yr	polyethylene liner wear	TKA	N
9		mild	0.00	M	88	28.8	L	> 1 yr	chronic infection	THA - 2nd stage	N/A
10		mild	9.77	F	81	24.9	R	> 1 yr	aseptic loosening	THA	RA
11		moderate	24.74	F	87	22.4	R	> 1 yr	aseptic loosening	THA	T2DM, polymyalgia rheumatica
12		mild	4.21	F	80	34.0	R	> 1 yr	aseptic loosening	THA	N
13	Diphtheroids (1)	severe	66.86	M	85	27.9	R	> 1 yr	infection - haematogenous spread	THA - 1st stage	polymyalgia rheumatica
14		severe	275.37	M	63	31.6	L	> 1 yr	metal-on-metal - adverse reaction	THA	N
15	<i>Staphylococcus epidermidis</i> (≥ 2)	moderate	25.11	F	89	23.0	R	< 3 mths	infection	TKA - 1st stage	N
16		severe	299.36	F	66	29.7	R	> 1 yr	metal-on-metal - adverse reaction	THA	N
17		mild	0.00	F	71	42.4	R	> 1 yr	aseptic loosening	THA	N
18	<i>Bacteroides fragilis</i> (≥ 2)	mild	13.36	M	86	22.7	L	> 1 yr	infection	THA - 1st stage	N
19	<i>Staphylococcus aureus</i> (≥ 2), <i>Staphylococcus lugdunensis</i> (≥ 2), <i>Staphylococcus epidermidis</i> (≥ 2)	moderate	44.92	F	81	28.0	R	< 3 mths	infection	THA - 1st stage	N
20		mild	0.00	M	84	27.9	R	> 1 yr	aseptic loosening	THA	N
21	<i>Staphylococcus epidermidis</i> (≥ 2)	mild	0.00	M	63	38.9	R	> 1 yr	infection	TKA - 2nd stage	N
22	<i>Staphylococcus epidermidis</i> (≥ 2)	severe	328.28	F	81	29.9	R	> 1 yr	infection	THA - 1st stage	N
23		mild	0.00	M	79	30.9	R	> 1 yr	aseptic loosening	THA	N
24		mild	0.00	F	69	25.9	L	> 1 yr	aseptic loosening	THA	N
25	<i>Staphylococcus aureus</i> (≥ 2)	moderate	24.81	M	63	34.5	L	> 1 yr	chronic infection	arthroscopy	T2DM
26	<i>Staphylococcus epidermidis</i> (≥ 2)	severe	137.66	F	78	37.4	R	3 mths to 1 yr	infection	THA - 1st stage	N
27		severe	328.28	M	77	30.5	R	> 1 yr	aseptic loosening	THA	N
28		moderate	40.29	M	73	24.2	L	> 1 yr	aseptic loosening	THA	N
29		mild	0.08	M	73	32.3	R	> 1 yr	infection	TKA - 2nd stage	N
30	<i>Staphylococcus aureus</i> (≥ 2)	moderate	38.80	M	72	37.3	R	> 1 yr	metal-on-metal -infection	THA - 1st stage	N
31		mild	0.00	M	74	N/A	R	> 1 yr	progression to lateral OA following UKA	TKA	N
32		mild	0.24	M	83	N/A	L	> 1 yr	aseptic loosening	THA	N
33		mild	2.85	F	77	38.1	R	> 1 yr	aseptic loosening	THA	N
34	<i>Staphylococcus aureus</i> (≥ 2)	severe	328.28	M	63	34.5	L	> 1 yr	chronic infection	TKA - 1st stage	T2DM
35		moderate	34.64	F	76	28.8	L	> 1 yr	aseptic loosening	THA	N
36		moderate	15.80	M	72	37.3	R	> 1 yr	metal-on-metal - infection	THA - 2nd stage	N

(Continued)

Supplementary Table i (Continued)

Study no.	Isolated organisms (number of samples isolated from)	Calprotectin test risk category	Calprotectin value, mg/l	Sex	Age, yrs	BMI, kg/m ²	Left or right	Time since original implant	Indication for operation	Procedure	Past medical history
37	<i>Staphylococcus aureus</i> (≥ 2)	severe	328.28	M	72	30.8	L	> 1 yr	infection	THA - 1st stage	N
38		mild	0.00	M	65	27.6	L	> 1 yr	chronic infection	TKA - 1st stage	N
39		mild	0.00	F	45	22.6	R	> 1 yr	aseptic loosening	THA	N
40		mild	0.00	M	80	36.2	L	> 1 yr	aseptic loosening	THA	N
41		mild	1.21	M	63	34.5	L	> 1 yr	chronic infection	TKA - 2nd stage	T2DM
42	<i>Escherichia coli</i> (≥ 2), <i>Klebsiella aerogenes</i> (≥ 2)	moderate	27.24	M	72	34.7	R	< 3 mths	infection	washout	T2DM
43		mild	0.00	M	69	37.8	R	> 1 yr	polyethylene wear	THA	T2DM
44		mild	6.61	F	78	30.7	R	> 1 yr	chronic infection	THA - 2nd stage	CLL
45		mild	0.00	M	64	32.6	L	> 1 yr	metal-on-metal - adverse reaction	THA	N
46	<i>Escherichia coli</i> (≥ 2)	moderate	42.27	F	72	34.4	L	> 1 yr	infection	THA - 1st stage	RA, T2DM
47		mild	0.00	F	81	19.7	R	> 1 yr	dislocation	THA	N
48	<i>Cutibacterium acnes</i> (≥ 2)	mild	0.00	F	62	23.2	R	> 1 yr	aseptic loosening	THA	N
49		mild	5.85	F	64	32.9	L	> 1 yr	aseptic loosening	THA	N
50	<i>Cutibacterium acnes</i> (≥ 2)	mild	0.00	F	71	35.3	L	> 1 yr	aseptic loosening	TKA	N
51		severe	328.28	M	48	26.1	L	> 1 yr	metal-on-metal - infection	THA - 1st stage	RA, ankylosing spondylitis
52		mild	0.00	M	73	29.2	L	> 1 yr	aseptic loosening	THA	polymyalgia rheumatica
53		severe	155.01	M	81	28.8	R	> 1 yr	aseptic loosening	THA	N
54		mild	0.00	M	77	34.3	L	> 1 yr	painful knee	arthroscopy	N
55	<i>Escherichia coli</i> (≥ 2)	severe	328.28	F	71	34.3	L	> 1 yr	aseptic loosening	TKA	N
56	<i>Pseudomonas aeruginosa</i> (≥ 2), <i>Corynebacterium tuberculostearicum</i> (≥ 2)	mild	0.00	M	76	30.2	L	> 1 yr	aseptic loosening	THA	N
57	<i>Cutibacterium acnes</i> (≥ 2)	mild	3.10	F	82	25.2	R	> 1 yr	aseptic loosening	TKA	N
58		mild	0.00	F	75	23.4	L	> 1 yr	aseptic loosening	THA	N
59	<i>Staphylococcus lugdunensis</i> (≥ 2)	severe	328.28	F	71	23.1	L	> 1 yr	infection	THA aspirate and washout	N
60	<i>Staphylococcus epidermidis</i> (≥ 2)	severe	328.28	F	76	32.2	L	> 1 yr	infection	TKA - 1st stage	N
61		mild	0.00	F	84	24.2	L	> 1 yr	aseptic loosening	THA	T2DM
62	<i>Proteus mirabilis</i> (≥ 2)	severe	328.28	F	74	N/A	R	> 1 yr	infection	THA - 1st stage	N
63		mild	0.00	M	78	27.0	L	> 1 yr	infection	THA - 2nd stage	N
64		mild	0.00	F	75	31.6	L	> 1 yr	dislocation	THA	N
65		severe	212.61	F	83	26.4	L	> 1 yr	aseptic loosening/metallosis	THA	N
66		mild	6.00	M	75	32.7	R	> 1 yr	aseptic loosening/infection	arthroscopy	N
67		severe	328.28	M	68	29.6	R	> 1 yr	metal-on-metal - adverse reaction	THA	ulcerative colitis
68		mild	0.00	F	84	20.8	R	> 1 yr	aseptic loosening	THA	N
69	<i>Corynebacterium striatum</i> (≥ 2), <i>Finnegoldia magna</i> (≥ 2)	severe	328.28	M	81	26.3	L	> 1 yr	chronic infection	THA - 1st stage	RA

Isolated organisms from samples International Consensus Meeting 2018 criteria positive by culture alone or culture from one sample with additional criteria met for infection. Calprotectin test risk category according to Lyfstone packet insert (Lyfstone AS, Tromsø, Norway), < 14 mg/l mild, 14 to 50 mg/l moderate, > 50 mg/l severe.

BMI, body mass index; CLL, chronic lymphocytic leukaemia; N/A, not available; OA, osteoarthritis; RA, rheumatoid arthritis; THA, total hip arthroplasty; TKA, total knee arthroplasty; T2DM, type 2 diabetes mellitus; UKA, unicompartmental knee arthroplasty.