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Bilan dentaire pré-opératoire

G3- Is there a role for preoperative dental screening in patients undergoing major orthopaedic procedures?

Fatih Yıldız, Mustafa Alper İncesoy, Eustathios Kenanidis, Shrinand Vishwanath Vaidya, Hazem M Alkhawashki, Yutaka Inaba, Katsufumi Uchiyama, Laura E Damioli, Mohamed M Fadel

Response/Recommendation: No. There is no concrete evidence that routine preoperative dental screening is needed in patients undergoing major orthopaedic procedures.

Strength of recommendation: Moderate

1. Mirzashahi B. Musculoskelet Surg 2019
2. Lampley A. J Arthroplasty 2014
3. Sonn KA. J Arthroplasty 2019
4. Fenske F. J Clin Med 2023
5. Tye EY. Arthroplast Today 2021
6. Kwan SA. Cureus 2023
7. Tokarski AT. J Arthroplasty 2014
8. Vuorinen M. Scand J Surg 2019
9. Fenske F. Infection 2024

Bilan urinaire pré-opératoire

G12: Does asymptomatic urinary bacteriuria increase the risk of Surgical Site Infection (SSI)/periprosthetic joint infection (PJI) in patients undergoing major orthopaedic surgery?

Seyed Mohammad Javad Mortazavi, Ali Soltani Farsani, Juliana Matos, Meeri P Honkanen, Eustathios Kenanidis, Gurava Reddy Annapareddy, Eleftherios Tsiridis, Daniel Diego, Carl Herndon, Vito Pavone

Response/Recommendation: Although there seems to be a correlation between asymptomatic bacteriuria (ASB) and an elevated risk of periprosthetic joint infections (PJI) / deep surgical site infections (SSI) in patients undergoing major orthopaedic surgeries, the microorganism causing SSI/PJI is almost always different from that identified in ASB.

Level of Evidence: Moderate

Anémie pré-opératoire

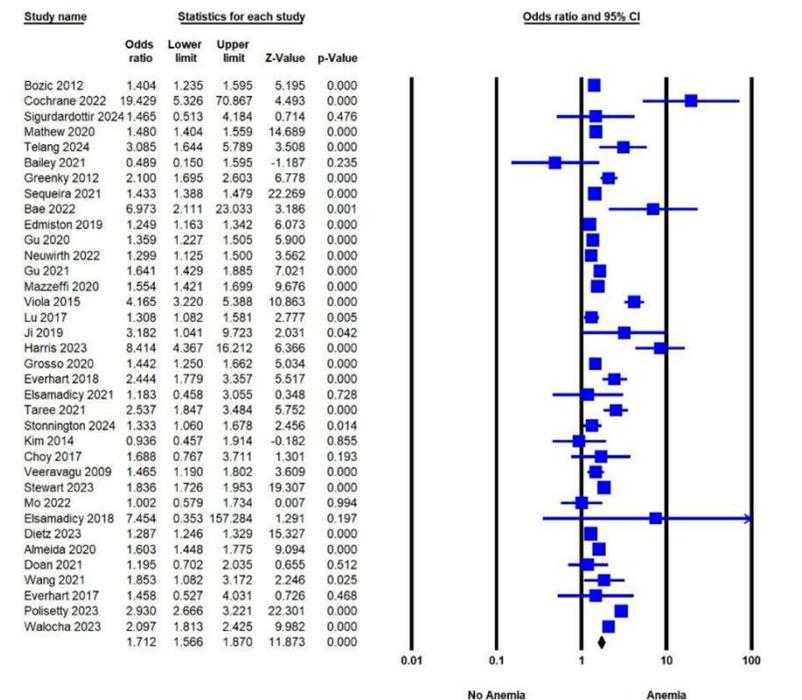
G14: Is preoperative anaemia a risk factor for SSI/PJI for patients undergoing major orthopaedic surgery?

Mortazavi, Seyed Mohammad Javad; Razzaghof, Mohammadreza, Grammatopoulos, George, Inaba, Yutaka; Annappareddy, Gurava Reddy; Lizarraga, Marcelo; Meermans, Geert; Negrete Corona, Jorge; Badaruddin, Badrul Shah; Hernandez, Victor H; Ferrari, Matteo

Response/Recommendation:

Yes. Preoperative anemia is a risk factor for surgical site infection (SSI) and periprosthetic joint infection (PJI) in patients undergoing major orthopedic surgeries.

Level of Evidence: Moderate



Meta Analysis

Acide tranexamique

G15: Does the use of tranexamic acid reduce the incidence of infection in patients undergoing major orthopedic surgery?

Palmer AJR, Moradi A, Kendrick BJL, Yasuhito T, Crestani M, Wu M, Ashraf J, Hajiaghajani S, Eybpoosh S, Enayatollahi M

Response/Recommendations:

Yes. The use of tranexamic acid (TXA) reduces the risk of periprosthetic joint infection (PJI) within two years of joint arthroplasty.

Level Of Evidence: Moderate

1. Whitehouse JD. Infect Control Hosp Epidemiol. 2002
2. Kennedy DG. Antibiotics (Basel). 2022
3. Haque M. Risk Manag Healthc Policy. 2020
4. Sukeik M. Surgeon. 2020
5. Reale D. Biomed Res Int. 2021
6. Elmenawi KA. J Arthroplasty. 2024

Corticoïde per-opératoire

G49: Does administration of intravenous steroids (dexamethasone) during major orthopedic procedures increase the risk of subsequent Surgical Site Infection (SSI)/Periprosthetic Joint Infection (PJI)?

Ibrahim Elganzoury, Armita Armina Abedi , Annette W-Dahl, Jean-Yves Jenny, Javad Mortazavi, Trifon Totlis, Dragan Radoičić, Vladislav Bartak, Azlina Amir Abbas, Ahmed Saeed Younis

Response/Recommendations: No. There is no concrete evidence linking intraoperative administration of intravenous low dose steroids to an increased risk of subsequent SSI/PJI.

- *reduce the need of postoperative narcotics and pain medications*
- *reducing postoperative inflammatory response, pain, nausea and vomiting and also accelerating postoperative rehabilitation*

1. Teshome D. Int J Surg Open 2020
2. Abedi AA. J Arthroplasty. 2024
3. Gottschalk MB. J Hand Surg Am 2022
4. Desai MJ. J Hand Surg Am 2016
5. Wagner ER. J Shoulder Elb Surg 2024

Ponction pré-opératoires

HK19- Should joint aspiration be performed in patients undergoing revision arthroplasty for presumed aseptic failure?

Fatih Yıldız, Mustafa Alper Incesoy, Jiří Gallo, Marta Sabater-Martos, Ruben A Limas, AbdulRahman A Babaqi, Rosa Elena Silva, Parag Sancheti, Kerem Başarır

Response/Recommendation: Yes. All joints undergoing revision arthroplasty for assumed aseptic failure should be aspirated, whenever possible. The aspiration can be done either preoperatively or at the time of surgery before arthrotomy.

Level of Evidence: Moderate

1. Parvizi J. J Arthroplasty 2012
2. Staphorst F. Arch Orthop Trauma Surg 2021
3. Barberis L, J Arthroplasty 2024
4. Rasouli MR, J Arthroplasty 2012
5. Morgenstern C. Diagn Microbiol Infect Dis 2018
6. Kwon Y-M. J Arthroplasty 2016

Prélèvements bactériologiques per-op

G71: What are the optimal sampling and processing techniques for cultures obtained during any revision surgery?

Martin Rottman MD, PhD, Tulio Campos, MsC, PhD, Cesar Rocha, MD, Anne-Laure Roux, PharmD, PhD^{1,5}

Response/Recommendation: Four to six samples should be submitted to the microbiology laboratory and include at least three periprosthetic tissue samples. Synovial fluid and implant sonication fluid can be sent, if available. Samples should be mechanically homogenized to maximize bacterial extraction and minimize contamination. Prolonged incubation in monitored blood-culture vials increases the sensitivity of culture and should be substituted to classical broth enrichment when possible.

ATB probabiliste

Q84: Does Extended Antibiotic Prophylaxis Reduce Periprosthetic Joint Infection Rate in Patients Undergoing Aseptic Hip or Knee Revision Arthroplasty

Joost T.P. Kortlever, Karin Veerman, Raul Bogola, Thiago Busato, Harriet Hughes, Fabiano Kupczik, Jon H.M. Goosen

Response/Recommendation: No. There is no concrete evidence that administration of extended antibiotic prophylaxis reduced the rate of PJI in patients undergoing aseptic revision knee or hip arthroplasty.

Level of Evidence: Limited

HK88: Should prophylactic antibiotics be withheld during revision arthroplasty for aseptic failure until culture samples are taken?

Joshua P. Rainey, Carlos A. Higuera-Rueda, Elido A. Perez-Gonzalez, Paulo Alencar, Amir Khoshbin, Wenwei Qian, Anders Odgaard, Lucas A. Anderson

Response/Recommendation:

No. Prophylactic antibiotics should not be withheld to obtain culture samples, during revision arthroplasty for aseptic failure.

Level of Evidence: Strong

1. Bukowski BR. Journal of Arthroplasty. 2022
2. Bundschuh KE. Journal of Arthroplasty. 2024
3. Claret G. Surg Infect. 2015
4. Dasari SP. Journal of Arthroplasty. 2024
5. DeFrancesco CJ. HSS J. 2019

D.A.I.R.

HK 48: What patients are candidates for Debridement, implant retention, and antibiotic administration (DAIR)?

James Cashman, Paul McCarroll, Peter Choong, Alexander Neuwirth, Pedro Ivo Carvalho, Nicolaas Budhiparama, Ewout S Veltman, David Dewar, Yan-Guo Qin, Mehmet Kursat Yilmaz

Response/Recommendation: In general, all patients with acute onset of infection and with a stable prosthesis are candidates for DAIR. However, the expected infection eradication rate greatly depends on several patient and infection characteristics. The following patients are considered good candidates for DAIR:

- Infection within six weeks of the index arthroplasty
- Infection with an onset symptom of < seven days
- Well-fixed and stable implants.
- Exceptions may apply

Debridement and Implant Retention (DAIR) Success Calculator

Patient Demographics
Patient Comorbidities
Procedure
Complications
Laboratory and Culture Results
Risk Factors for Failure



1. Seidelman JL. JAMA 2023
2. Wenzel RP. Infect Control Hosp Epidemiol. 2019
3. Anderson DJ. Surgical site infections. Infect Dis Clin North Am 2011
4. Mangram AJ. Guideline for prevention of surgical site infection, 1999
5. Ritter MA. Clin Orthop Relat Res 1975
6. Davies R. Dispersal of bacteria on desquamated skin. The Lancet 1962

D.A.I.R.: changement des implants modulaires

- *reduced bioburden and improved exposure to the effective joint space for more thorough debridement*

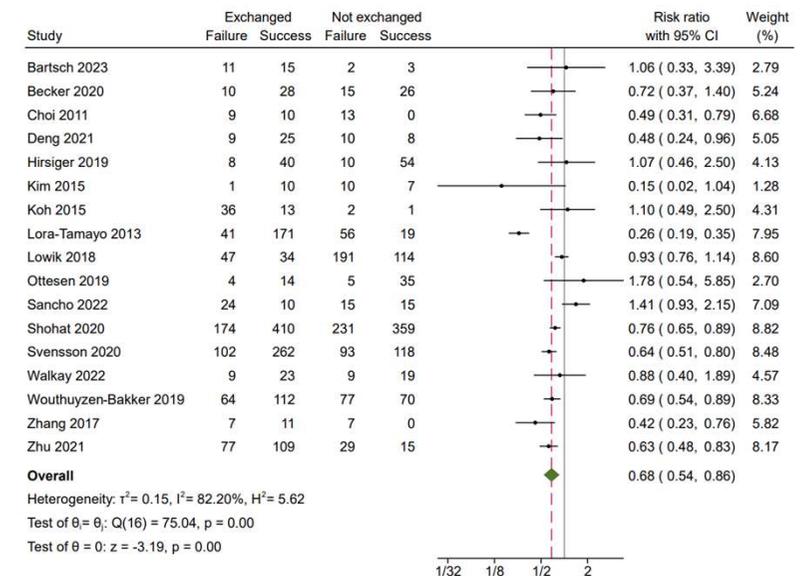
HK52: Should modular components be exchanged during debridement, antibiotics, and implant retention for acute periprosthetic joint infection?

Siddharth Rele, Daniel Gould, Elise Naufal, Armin Arshi, Akram Hammad, Xiaogang Zhang, Javier Ros Martinez, Ola Rolfson, Peter FM Choong

Response/Recommendation:

Exchange of modular components at the time of debridement, antibiotics, and implants for the treatment of periprosthetic joint infection is associated with a lower risk of failure and is recommended, whenever feasible.

Level of Evidence: Moderate



D.A.I.R. itératifs

HK54: Is there a role for repeat debridement, implant retention, and antibiotic administration (DAIR) in patients who have acute periprosthetic joint infection (PJI) of the hip or knee?

Fatih Yıldız, Mustafa Alper İncesoy, Alvaro Auñon-Rubio, Osman Çiloglu, Lluís Font-Vizcarra, Massimo Franceschini, Akram A Hammad, Huiwu Li, Felix Vilchez-Cavazos, Mark J Spangehl

Response/Recommendation:

Possibly. In patients who have an acute PJI of the hip or knee, repeat DAIR appears to increase the overall success rate of infection eradication when performed after failure of initial DAIR or as a planned, two-stage procedure.

Level of Evidence: Moderate

HK55: How many Debridement, Antibiotics, and Implant Retention (DAIR) procedures are acceptable before consideration should be given to resection arthroplasty?

Christopher T Holland, Óliver Marín-Peña, Cheng-Fong Chen, Jeffrey B. Stambough, Akram A. Hammad, Julio César Paalacio Villegas, Kayahan Karaytug, Ismail Remzi Tözün, Catriona Hunter, Jonathan T. Evans.

Response/Recommendation: Limited evidence suggests that after two failed debridement, antibiotics, and implant retention (DAIR) procedures resection arthroplasty, should be considered.

Level of Evidence: Limited

Révision après échec de DAIR

HK57: Does a prior DAIR influence the outcome of subsequent exchange arthroplasty in patients with PJI?

Mortazavi,Seyed Mohammad Javad; Mortazavi,Seyed Amirsadegh; Falotico,Guilherme, Buttacavoli, Frank; Nandi,Sumon; Puyi,Sheng; Allende,Bartolome L; Tsai, Shang-Wen; McCulloch, Robert; Petheram, Tim;

Response/Recommendation: Prior DAIR may increase the likelihood of failures in two-stage reimplantation. This may be due to selection bias, those patients failing DAIR possibly being sicker or having organism related or surgery related factors pre-disposing them to worse outcomes.

1. Longo, U.G. JOURNAL OF ISAKOS JOINT DISORDERS & ORTHOPAEDIC SPORTS MEDICINE, 2024
2. Brimmo, O. JOURNAL OF ARTHROPLASTY, 2016.
3. Nodzo, S.R. Journal of Arthroplasty, 2017
4. Rajgopal, A. Journal of Arthroplasty, 2018
5. Lizaur-Utrilla, A. Knee Surg Sports Traumatol Arthrosc, 2019
6. Kim, K., et al. Journal of Arthroplasty, 2019

ISO aiguë post-opératoire

HK49: What is the optimal treatment for acute postoperative periprosthetic joint infection for patients who have received uncemented implants?

Erik Hansen, James Nace, Antonio V Pelligrini, Federico Llobet, David Campbell, Jeppe Lange, William Arbelaez, Jose Ignacio Sanchez, Mansour Abolghasemian

Response/Recommendation:

In the absence of definitive evidence, we recommend that in patients with acute postoperative periprosthetic joint infection (PJI), a strong consideration be given to the removal of infected uncemented implants, particularly when not osseointegrated, and performing a one-stage exchange arthroplasty.

1. Chung AS. J Arthroplasty. 2019
2. Estes CS Clin Orthop Relat Res. 2010
3. Wouthuyzen-Bakker M. J Arthroplasty. 2020
4. Salman LA. Eur J Orthop Surg Traumatol. 2024
5. Hansen E. Clin Orthop Relat Res. 2013
6. Riemer K. J Bone Jt Infect. 2022

Révision septique en 1 temps

HK60: During single-stage exchange arthroplasty, should we use two separate instrument setups and re-drape single-stage exchange arthroplasty, should we use two separate instrument setups and re-drape after resection?

Authors: Matthew J. Dietz¹, Thomas L. Hilton², Johannes Goosen³, Jakub Ratkowski¹, Jesse W.P. Kuiper⁴, Jesse E Otero⁵, Jian Bing Ma⁶, Plamen S Kinov⁷, Hamed Vahedi⁸, Peter Gold⁹

Response/Recommendation:

Yes. The use of two separate instrument setups and the use of new drapes after resection in single-stage exchange arthroplasty are associated with a lower risk of contamination and the possibility of infection recurrence.

Level of Evidence: Limited

1. Haddad FS. Clin Orthop Relat Res 2015
2. Jiranek WA. J Arthroplasty 2015
3. Zahar A. Orthop Clin North Am 2016
4. Liechti EF. Bone Joint J 2022
5. Dalstrom DJ. J Bone Joint Surg Am 2008
6. Menekse G. Spine 2015
7. Russell M. Iowa Orthop J 2022

Contre-indications au 1 temps

HK59: Are there any absolute contraindications to performing one stage exchange arthroplasty for patients with chronic periprosthetic joint infection (PJI)?

Li Cao, Ewout S Veltman, Ayman Ebied, James Cashman, Luiz S Marcelino Gomes, Scot A Brown, , Andrew Fraval, Yanguo Qin, Carl L Herndon, Yicheng Li

Response/Recommendation:

No. We do not feel that there are any absolute contraindications to one-stage exchange arthroplasty. However, relative contraindications may include signs of systemic sepsis, severely immunocompromised status, and extensive soft tissue defects that compromise primary wound closure.

1 temps & fistule

HK63: Can One-Stage Exchange Be Done in Patients with an Active Sinus Tract?

Wenbo Mu, Ayman Ebied, Guydo Duarte, Jonathan T Evans, Markus Rupp, Mathias Glehr, Ricardo Sousa, Rosalba Tortia, Xiaogang Zhang.

Response/Recommendation:

Yes. One stage exchange can be done in patients with sinus tract as long as soft tissue coverage can be obtained at the conclusion of surgery.

Strength of recommendation: Moderate

1 temps et infection fongique

HK-62 – Can one stage exchange be done in patients with fungal periprosthetic joint infection (PJI)?

Akos Zahar, Chikodi Angad, Jose Baeza-Oliete, Nicholas A. Bedard, Timothy S. Brown, László Bucsi, Ayman Ebied, Bálint L. Horváth, Shivaprasad Kolur, Róbert Szódy

Response/Recommendation:

Yes. One-stage exchange arthroplasty is a viable option for selected patients with fungal PJI.

Révision septique de PTE

SH82. Should well-fixed glenoid components be removed during surgical treatment for subacute or chronic shoulder periprosthetic joint infection (PJI)?

Faheem Bhatti; Puneet Monga MBBS, MSOrth, DNB, MSc, DipSortsMed, FRCS (Orth), MD; Raúl Barco Laakso MD, PhD; Harvinder Singh PhD, FRCSEd (Orth), Dip Orth Eng, MS (orth), MBBS

Recommendation:

There are currently no studies comparing outcomes between well-fixed and loose glenoid components. From the limited evidence, we recommend removal of glenoid components, in the treatment of shoulder periprosthetic joint infection (PJI) based on higher rates of treatment failure being reported following component retention compared to one-stage and two-stage revision with implant removal. However, there may be situations where patients and surgeons select to accept this higher treatment failure rate to reduce the morbidity associated with implant removal. Further comparative research is needed on this topic to guide clinical practice.

Strength of Recommendation: Limited

1. Mercurio M. Journal of Shoulder and Elbow Surgery. 2019
2. Bdeir M. 2024
3. Yerke Hansen P J Shoulder Elbow Surg. 2024
4. Hollier-Larousse B. Orthopaedics and Traumatology: Surgery and Research. 2024
5. Givens J. J Shoulder Elbow Surg. 2024

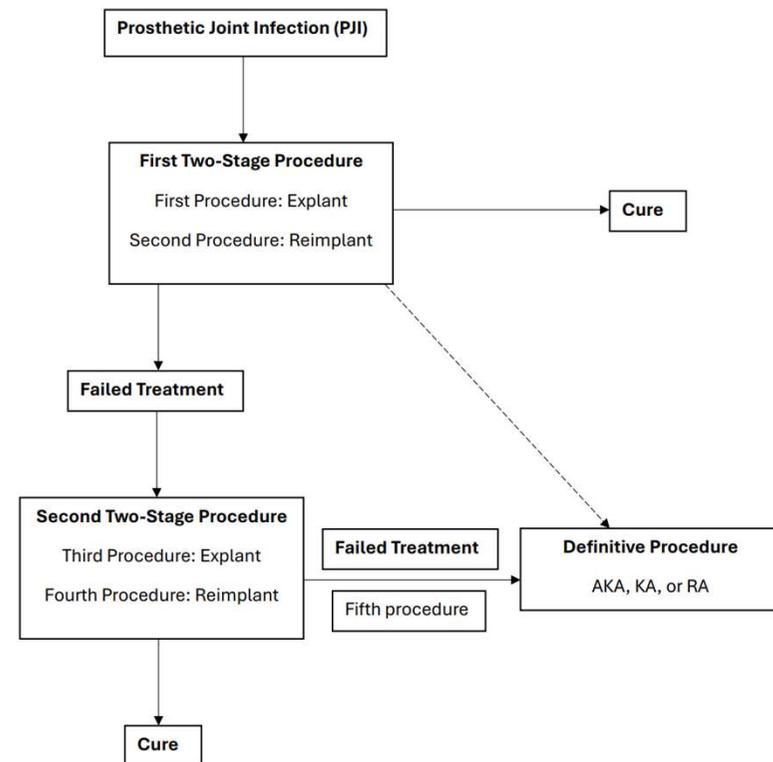
Nombre limite de révision septique?

HK 77 - Is there a limit to the number of exchange arthroplasty or surgical procedures in patients who continue to fail treatment for periprosthetic joint infection (PJI)?

Ashley Castan, Tomislav Madjarevic, Jesse Wolfstadt, Jeffrey B. Stambough, Andrea Sambri, Nicholas A. Bedard, Joseph Benevenia

Response/Recommendation: Yes. Assuming that prior surgical procedures were carried out properly, patients failing a second two stage exchange should not be subjected to additional reconstruction surgery.

Strength of recommendation: Moderate



MERCI DE VOTRE ATTENTION

