HOW DO SHOULD WE CLOSE OUR HIPS??

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DISCLOSURES

- Smith and Nephew---Fellowship funding
- Stryker----Fellowship funding
- Omega ---Fellowship funding

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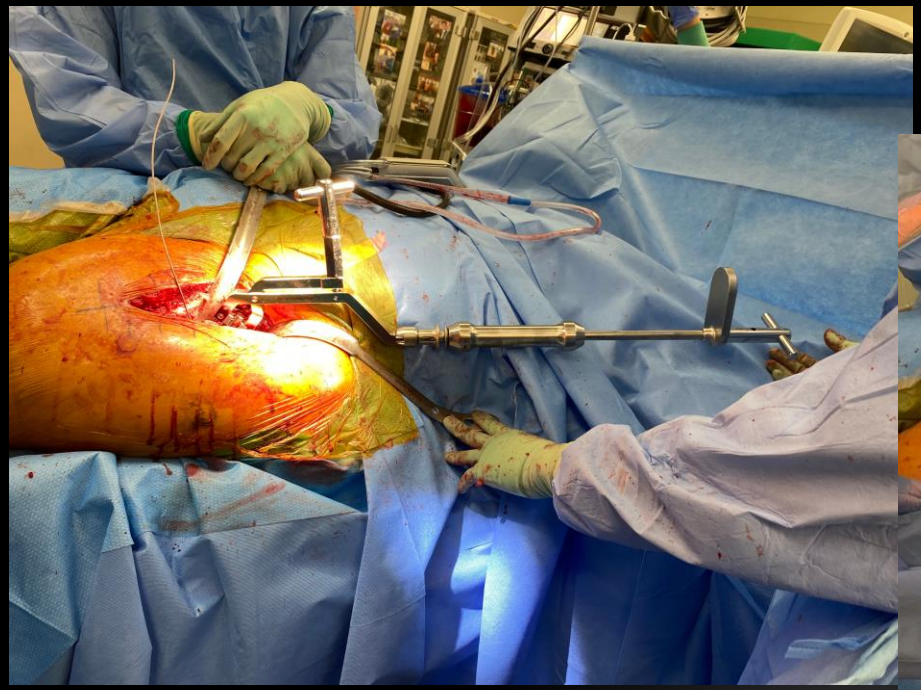
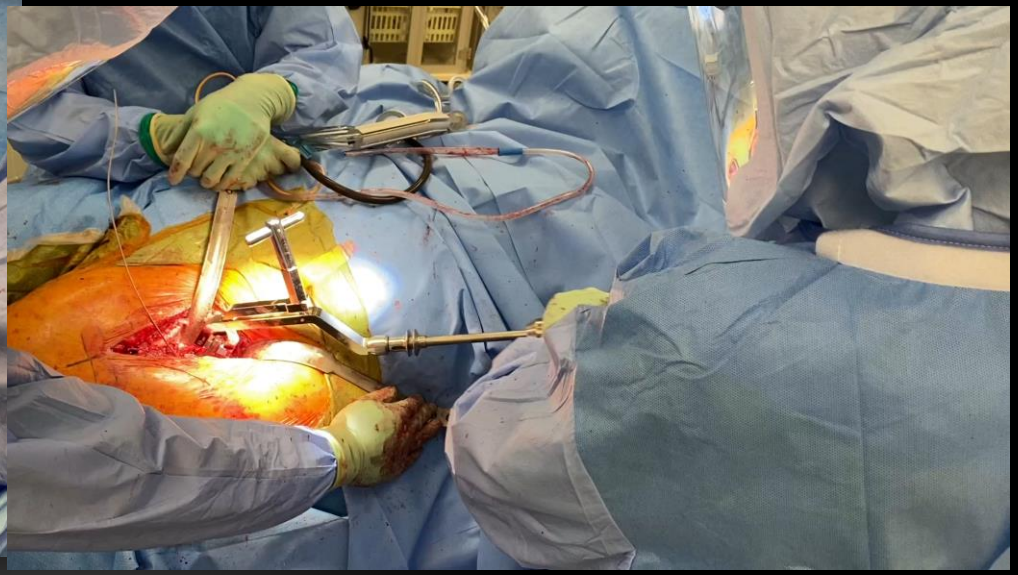
OBJECTIVES

- Current known risk factors for poor wound healing
- Review current literature around closure of THA
- Review current literature based on approach
- Review current literature for revisions and higher risk patients





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RISK FACTORS

Arthroplast Today. 2019 Sep; 5(3): 329–333.
Published online 2019 Jun 29. doi: 10.1016/j.artd.2019.05.003
PMCID: PMC6728765
PMID: 31516977

The risk factors and an evidence-based protocol for the management of persistent wound drainage after total hip and knee arthroplasty

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Table 2

Risk factors for persistent wound drainage.

Comorbidity/demographics	Odds ratio	95% Confidence interval
Diabetes	21.2	12.8-25.1
Morbid obesity	17.3	14.7-21.5
Rheumatoid arthritis	14.2	11.7-16.5
Chronic alcohol use	4.3	2.3-6.1
Hypothyroidism	2.8	1.3-4.2
Female gender	1.9	1.1-2.2
Total knee arthroplasty	1.4	1.1-1.6

CURRENT LITERATURE

PRIMARY HIP · Volume 39, Issue 6, P1524-1529, June 2024

Open Access

International Delphi Study on Wound Closure and Incision Management in Joint Arthroplasty Part 2: Total Hip Arthroplasty

Margaret Ainslie-Garcia, MD [a] · Lucas A. Anderson, MD [b] · Benjamin V. Bloch, MD [c] · ... · Pascal-André Vendittoli, MD [t] · Helge Wangen, MD [u] · Luigi Zagra, MD [v]

Selection of 20 international Orthopedic surgeons specializing in THA

Targeted literature review and Statement development

Round 1 electronic survey (>75% consensus agreement)

Round 2 Virtual face to face meeting

Final electronic confirmation

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Consensus Statement	% (N/N)
Wound Closure and Sutures	
There is not enough evidence to assess differences in wound complication rates between barbed sutures and interrupted closure with nonbarbed sutures for closure of the deep fascial layer in total hip arthroplasty.	100% (20/20)
There are shorter closing times with the use of barbed sutures versus interrupted closure with nonbarbed sutures for the closure of the deep fascial layer in total hip arthroplasty.	100% (20/20)
While barbed sutures may cost more than interrupted closure with nonbarbed sutures, closure with barbed sutures may save costs due to faster closing times and reduced operating room time in total hip arthroplasty.	85% (17/20)
Sutures are associated with a lower risk of superficial surgical site infections compared with staples for skin closure in total hip arthroplasty.	95% (19/20)
There is insufficient evidence to determine the difference in cosmesis between staples and sutures for skin closure in total hip arthroplasty.	100% (20/20)

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Skin Closure Alternatives	
There are no differences in rates of wound complications between skin glue and other skin closure methods in primary total hip arthroplasty.	80% (16/20)
There may be a higher patient preference for subcuticular wound closure versus staples in total hip arthroplasty.	100% (20/20)
Closing time with skin staples is significantly shorter than with other skin closure methods in total hip arthroplasty.	100% (20/20)

Dressings and Postoperative Care	
There may be a lower rate of wound complications with mesh-adhesives versus silver-impregnated dressings in total hip arthroplasty.	80% (16/20)
There is insufficient evidence to determine if mesh-adhesive dressings lead to fewer wound complications than other dressings in total hip arthroplasty.	95% (19/20)
Occlusive dressings (silver-impregnated) require fewer changes than conventional dressings in total hip arthroplasty.	85% (17/20)
Surgical Approaches and Techniques	
No significant differences in wound complication rates between direct anterior, postero-lateral, and bikini incision direct anterior approaches.	80% (16/20)

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Surgical Approaches and Techniques	
No significant differences in wound complication rates between direct anterior, postero-lateral, and bikini incision direct anterior approaches.	80% (16/20)
The use of drains during total hip arthroplasty does not reduce the risk of wound complications.	100% (20/20)
Patient Risk Stratification and Outcomes	
Except for dabigatran and warfarin, which have higher rates of wound complications, there are no differences in rates of wound complications and infection between different venous thromboembolism chemoprophylactic methods after total hip arthroplasty.	95% (19/20)

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Total Knee and Total Hip Arthroplasty	
Negative-Pressure Wound Therapy	
In high-risk patients, there is a lower risk of wound complications with negative-pressure wound therapy compared with other dressing types in total hip and total knee arthroplasty.	100% (20/20)
In high-risk patients, negative-pressure wound therapy is associated with lower rates of reoperation compared with other dressing types in total hip and total knee arthroplasty.	95% (19/20)
In high-risk patients, negative-pressure wound therapy is associated with a reduction in dressing changes compared with other dressing types in total hip and total knee arthroplasty.	100% (20/20)
Triclosan-coated sutures	
Based on the available evidence, triclosan-coated sutures are likely to reduce the risk of surgical site infection in total hip and knee arthroplasty.	95% (19/20)

HIGH RISK WOUNDS

World J Orthop. 2016 Jan 18; 7(1): 30–37. PMCID: PMC4716568
Published online 2016 Jan 18. doi: 10.5312/wjo.v7.i1.30 PMID: 26807353

Role of negative pressure wound therapy in total hip and knee arthroplasty

Marcelo BP Siqueira, Deepak Ramanathan, Alison K Klika, Carlos A Higuera, and Wael K Barsoum

Author information ▸ Article notes ▸ Copyright and License information PMC Disclaimer

- Review article on purpose and function
- (1) macrodeformation; (2) microdeformation; (3) fluid removal; and (4) stabilization of the environment[33].
- Numerous indirect effects of NPWT on wound healing have also been proposed, including the modulation of inflammation[34], angiogenesis[35], granulation tissue formation[36,37], peripheral nerve response[38,39] and alteration in bioburden

HIGH RISK WOUNDS

- 109 patients treated with NPWT post operatively
- Placed on POD#3-4
- Resolution of drainage in 76%
- 11 had superficial I&D
- 12 had deep I&D
- 3 had component remmoval

Clin Orthop Relat Res. 2013 Oct; 471(10): 3230–3236.
Published online 2013 Mar 29. doi: 10.1007/s11999-013-2937-3
PMCID: PMC3773159
PMID: 23539123

Negative Pressure Wound Therapy Is Associated With Resolution of Incisional Drainage in Most Wounds After Hip Arthroplasty

Erik Hansen, MD, Joel B. Durinka, MD, James A. Costanzo, MD, Matthew S. Austin, MD, and Gregory K. Deirmengian, MD

HIGH RISK WOUNDS

SYSTEMATIC REVIEW & META-ANALYSIS · Volume 36, Issue 7, P2402-2411, July 2021

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Closed Incision Negative Pressure Wound Therapy for Elective Hip and Knee Arthroplasty: A Systematic Review and Meta-Analysis of Randomized Controlled Trials

Nikhil Ailaney, MD [a] · William L. Johns, MD [a] · Gregory J. Golladay, MD [b] · Benjamin Strong, MD [b] · Niraj V. Kalore, MD [b]

Affiliations & Notes · Article Info

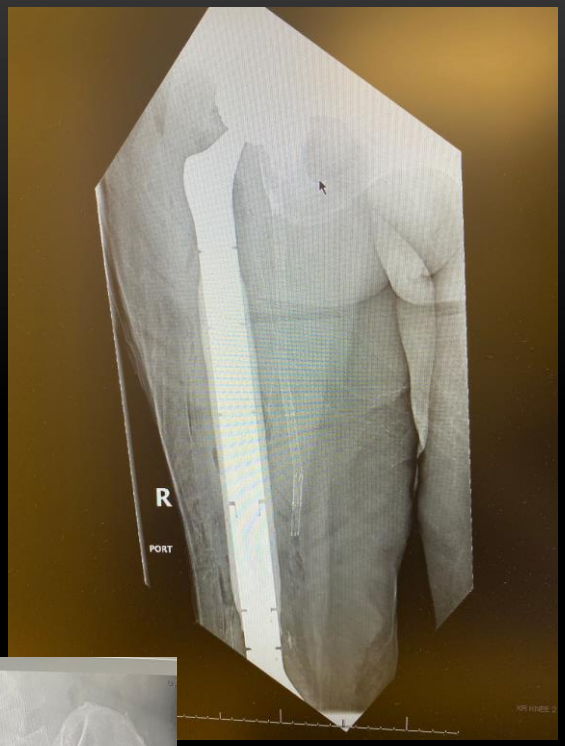
- NPWT decreases risk of SSI in revision TJA
- NPWT increases non-infectious wound complications in primary TJA (blistering, etc..)
- May decrease length of stay
- May decrease re-operation rate

MY PROTOCOL

- Anterior Based surgeon for primaries
- **Layered closure
  - Fascia interrupted #1 Vicryl
  - Subcutaneous—layered with #1 vicryl (layer for every inch of fat)
  - Subcutaneous 2.0 monocryl
  - Running 3.0 monocryl
  - Dermabond + steri strips
  - Occlusive dressing (Silver ion)

MY PROTOCOL

- Revisions posterior, anterior, lateral
- **Layered closure
  - Capsule with nonabsorbable ethibond
  - Fascia interrupted #1 Vicryl
  - Subcutaneous—layered with #1 vicryl (layer for every inch of fat)
  - Subcutaneous 2.0 monocryl
  - Interupted 2.0 Nuylon
  - Low threshold for NPW systems



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