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Title

Knee disarticulation in critical ischemia: knowledge gap in Dutch National guideline Amputation and Prosthetics 2020

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Summary

Knee disarticulation is recommended as a potential attractive alternative to above-knee amputation by the Dutch National guideline for patients with critical ischemia. No clinical comparative studies support this statement and surgeons are hesitant for high reamputation rates.

Introduction/ basics

The choice of amputation level in patients with critical ischemia is an important decision with large consequences for the mobility and self-reliance of this vulnerable patient group. In the recently published national guideline Amputation Prosthetics 2020 it is established that we currently do not know what the mobility of our patients with the different amputation levels in the Netherlands (knowledge gap). In the guideline is advised to consider more knee disarticulations instead of transfemoral amputations with the general rule that the shorter the stump, the less mobile with prosthetic leg with the additional potential advantage is the final load capacity of the stump after knee disarticulation. We look at two new Dutch studies on knee disarticulation and the number of re-amputations.

Material method; implementation/ process

The recently published National Dutch Guideline on Amputation and Prosthetics was consulted for recommendations on level of amputation in patients with critical limb ischemia. On the basis of two recently published Dutch cohort studies from Groningen and Nijmegen, re-amputation data were obtained.

Results

In the Groningen study (index amputation BKA n=227, KD n=33, AKA n=119), 23% of the lower leg underwent amputations within one year of transfemoral shortening. In the Nijmegen study (index amputation BKA n=280, KD n=18, AKA n=216) 14.3% of lower leg amputations underwent transfemoral shortening within one year. From patients after knee disarticulation (KD) in the Groningen study, 10 patients out of 33 (30%) underwent a transfemoral shortening and in the Nijmegen study 5 out of 18 (28%).

Discussion/ conclusion; conclusion for the practice

Knee disarticulation may be a suitable level of amputation in vascular patients due to the long and weightbearing stump. However it is not frequently performed with unknown functional results. Small studies show relatively risks of high re-amputation above the knee. This knowledge gap can only be addressed by conducting large comparative clinical studies

References

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