The Many Faces of Frailty in Vascular Surgery.

Banning, Louise; Visser, Linda; Pol, Robert

Published in:
European Journal of Vascular and Endovascular Surgery

DOI:
10.1016/j.ejvs.2018.12.035

Publication date:
2019

of patients in the standing position, unless it is absolutely certain that the calf muscles are not at all contracted during MRI acquisition, the observed phenomena are not related to the external compression exerted by medical compression stockings.

As reported recently,[5] we support the statement recommending that "the compartment pressure surrounding the deep veins has to be taken into account" for future investigations.

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Didier Rastel*, Bertrand Lun
SCOTT, Non-Profit Association, Grenoble, France

*Corresponding author. 30 Place Louis Jouvet, Grenoble 38100, France.
Email-address: d.rastel@wanadoo.fr (Didier Rastel)

Available online 23 March 2019

https://doi.org/10.1016/j.ejvs.2019.02.027
DOI of original article: https://doi.org/10.1016/j.ejvs.2019.01.035

Re: "Editor's Choice – Cerebral Hyperperfusion Syndrome after Carotid Artery Stenting: A Systematic Review and Meta-analysis"

We have read the meta-analysis by Huibers et al.[1] regarding cerebral hyperperfusion syndrome (CHS) after carotid artery stenting, but some points should be addressed.

Firstly, the authors found that CHS is a frequent complication after carotid artery stenting (CAS) leading to a high stroke rate.[1] However, they provide no data on perioperative medication. The type/duration of antiplatelet and antihypertensive treatment should be evaluated for everyday clinical practice. Moreover, post-intervention monitoring protocols were not investigated, although guidelines strongly recommend a standardised monitoring protocol for the first 24 h.[2]

Secondly, no pooled disabling stroke/mortality and no intracranial haemorrhage (ICH) risks were reported. In a recent review of ours, ICH was significantly associated with a higher mortality in patients with CHS (pooled OR = 386.977).[3] Additionally, Abreu et al.[4] found a 38% ICH risk and an associated mortality of 51%, with ICH being more frequent after CAS than after endarterectomy. Therefore, such outcomes should also be reported in systematic reviews.

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George Galyfos*, Fragiska Sigala, Konstantinos Filis
First Department of Propedeutic Surgery, National and Kapodistrian University of Athens Medical School, Hippocration Hospital, Athens, Greece

*Corresponding author. 114 Vasilissis Sofias Avenue, 11527, Athens, Greece.
Email-address: georgegalyfos@hotmail.com (George Galyfos)

Available online 23 March 2019

https://doi.org/10.1016/j.ejvs.2018.11.022
DOI of original article: https://doi.org/10.1016/j.ejvs.2018.05.012

The Many Faces of Frailty in Vascular Surgery

We read with great interest the systematic review and meta-analysis by Wang et al., on the impact of frailty on the outcome of elderly patients after major vascular surgery.[1] The authors present a nice detailed overview of current frailty papers. In their extensive analysis they evaluate multiple frailty tools, both single and multi-domain assessment tools, in major vascular surgery.

As described in the article, frailty is a syndrome defined as increased vulnerability because of a decline in reserve and

function, and consists of both cognitive and physical domains.[2] The complexity of frailty lies in its multi-component character and is difficult to capture in a single tool. Many of the frailty tools in the paper by Wang have great variation in the domains of frailty they cover. Some only consider the cognitive or functional domain, whereas others take all the domains of frailty (multi-domain tools) into account.[3,4] Because of these essential differences in frailty instruments it is difficult to compare these tools with each other and implement clinical use, especially as some domains of frailty have a more powerful effect on the outcome than others.[5] The article shows us an extensive range of different tools with broad variation, but also similarities, in the measured domains. Important is the realisation, when choosing a particular frailty tool (especially in single domain tools), that in a sense it is not frailty which is determined but a variation or approximation of the syndrome. Also, there are important differences between the domains, again each with its own effect on applicability and outcome. If we want to implement frailty in our daily practice and respond to the possible outcomes, we must ensure that we speak the same language when considering frailty in our patients. But despite these differences in composition, frailty as a concept proved an important risk factor after vascular surgery for a diminished physical and cognitive outcome. In future studies more emphasis should be placed on the impact of the different domains of frailty, and ideally the change that occurs within these domains after the surgery, so that preventive individualised interventions can be developed.

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Louise B.D. Banning, Linda Visser, Robert A. Pol*
Department of Surgery, Division of Vascular Surgery, University Medical Centre Groningen, University of Groningen, Groningen, The Netherlands

*Corresponding author. Department of Surgery, Division of Vascular and Transplantation Surgery, University Medical Centre Groningen, P.O. Box 30 001, 9700 RB Groningen, The Netherlands.
Email-address: pol.chirurgie@gmail.com (Robert A. Pol)

Available online 23 March 2019

https://doi.org/10.1016/j.ejvs.2018.12.035
DOI of original article: https://doi.org/10.1016/j.ejvs.2018.07.012