Author's response to reviews

Title: Direct intra-abdominal pressure monitoring via piezoresistive pressure measurement. A technical note.

Authors:

Jens Otto (jeotto@ukaachen.de)
Daniel Kaemmer (dkaemmer@ukaachen.de)
Marcel Binnebősel (mbinneboesel@ukaachen.de)
Marc Jansen (mjansen@ukaachen.de)
Rolf Dembinski (rdembinski@ukaachen.de)
Volker Schumpelick (vschumpelick@ukaachen.de)
Alexander Schachtrupp (alexander.schachtrupp@bbraun.com)

Version: 2 Date: 17 December 2008

Author's response to reviews: see over
Cover letter concerning formatting changes:

MS: 1183721804234067
Direct intra-abdominal pressure monitoring via piezoresistive pressure measurement. A technical note.
Jens Otto, Daniel Kaemmer, Marcel Binnebösel, Marc Jansen, Rolf Dembinski, Volker Schumpelick and Alexander Schachtrupp

We would be grateful if you could ensure that your revised manuscript conforms to the journal style. It is important that your files are correctly formatted. In addition, could you please carry out the following changes to the format of your ms:

1) Abstract - Abstracts must be structured into Background, Methods, Results, Conclusions. Please remember to also update the Abstract details on the submission page.

Done: “Abstract

Background: Piezoresistive pressure measurement technique (PRM) has previously been applied for direct IAP measurement in a porcine model using two different devices. Aim of this clinical study was to assess both devices regarding complications, reliability and agreement with IVP in patients undergoing elective abdominal surgery.

Methods: A prospective cohort study was performed in 20 patients randomly scheduled to receive PRM either by a Coach®-probe or an Accurate++®-probe (both MIPM, Mammendorf, Germany). Probes were placed on the greater omentum and passed through the abdominal wall paralleling routine drainages. PRM was compared with IVP measurement by t-testing and by calculating mean difference as well as limits of agreement (LA).

Results: There were no probe related complications. Due to technical limitations, data could be collected in 3/10 patients with Coach® and in 7/10 patients with Accurate++®. Analysis was carried out only for Accurate++®. Mean values did not differ to mean IVP values. Mean difference to IVP was 0.1±2.8 mmHg (LA: -5.5 to 5.6 mmHg).

Conclusions: Direct IAP measurement was clinically uneventful. Although results of Accurate++® were comparable to IVP, the device might be too fragile for IAP measurements in the clinical setting. Local ethical committee trial registration: EK2024”

2) Authors’ contributions - As listed currently, Dr Schumpelick does not meet our criteria for authorship, can we ask you to please review our authorship criteria below and revise the description of Dr Schumpelick’s contribution as required.

Done: “Authors’ contribution
J.O. and A.S. have made substantial contributions to conception and design. D.K. and M.J. have been involved in revising the manuscript critically for important intellectual content. M.B. and R.D. have made substantial contributions to acquisition of data. V.S. has been
involved in analysis and interpretation of data and has given final approval of the version to be published.”

With kind regards

Jens Otto