Response to letter to the editor entitled “Early insertion of the subdural drain during chronic subdural hematoma surgery” by N Beucier et al. regarding “Drain type and technique for subdural insertion after burr hole evacuation of chronic subdural hematoma” by TSR Jensen et al., *Acta Neurochirurgica* (Wien), 25 June 2020

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Received: 3 September 2020 / Accepted: 7 September 2020 / Published online: 11 September 2020
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We thank Beucier et al. for their interest in our recent technical note. In the present letter to the editor, Beucier et al. introduce further technical aspects, rather than discussing the technique presented in our note. Nevertheless, we would like to comment on these further technical aspects of chronic subdural hematoma surgery. We identify two issues in the letter:

- 1) The timing of subdural drain insertion during the procedure. The authors introduce the subdural drain early, before irrigation, in order to utilize the space before the brain shifts back towards the burr hole, especially in younger patients.

We agree that early introduction of the subdural drain may reduce the risk of complications further, and we find this change easy to implement. In theory, irrigation should not be hampered by having the drain in situ, especially if no other objects are introduced during irrigation. We suggest that the authors perform a study of

the subdural “gap” reduction during CSDH evacuation and irrigation, to document that this actually takes place, and to what degree. This can be measured by using ultrasound 3–4 times during evacuation/irrigation of the hematoma. In our practice, we have relatively few younger patients with CSDH, and those we have, below the age of 60, usually have brain atrophy from other conditions than age, such as chronic alcoholism. On the rare occasion, when we have a CSDH patient with a “tight” brain, the brain will sometimes block the burr hole right after penetration of the dura, preventing a large part of the hematoma fluid from draining out spontaneously. In this situation, we introduce a small cottonoid and press the inner membrane and brain down via this, to allow for additional fluid to escape. No subdural drain is needed in this scenario, as the brain obliterates the space very quickly.

- 2) The use of a urinary catheter for subdural irrigation.

We find this to be a potential hazard, as membranes within the hematoma may be damaged with remote arterial bleeding, which is difficult to stop, and may develop into acute subdural hematomas postoperatively. Before the introduction of the Danish national standardized guidelines for management of CSDH patients in 2018, a Nelaton catheter was used by some surgeons for irrigation with unfavorable outcome. Hence, we do not introduce any objects into the subdural space during irrigation.

This article is part of the Topical Collection on *Brain trauma*

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