Thickening of liquids reduces aspiration risk in acute stroke patients

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Aim

The aim of the study was to assess aspiration and penetration risk of liquids and thickened liquids determined by fiberoptic endoscopic evaluation of swallowing (FEES) in a group of acute stroke patients.

Methods

We retrospectively analyzed FEES protocols of 72 acute stroke patients. We selected to further analysis patients who received liquids and compared distribution of aspiration status determined according to the Penetration Aspiration Scale (PAS) for liquid, nectar thick liquid and pudding thick liquid.

PAS 1-2 was considered normal,
PAS 3-5 indicated penetration and
PAS 6-8 indicated aspiration.

Results

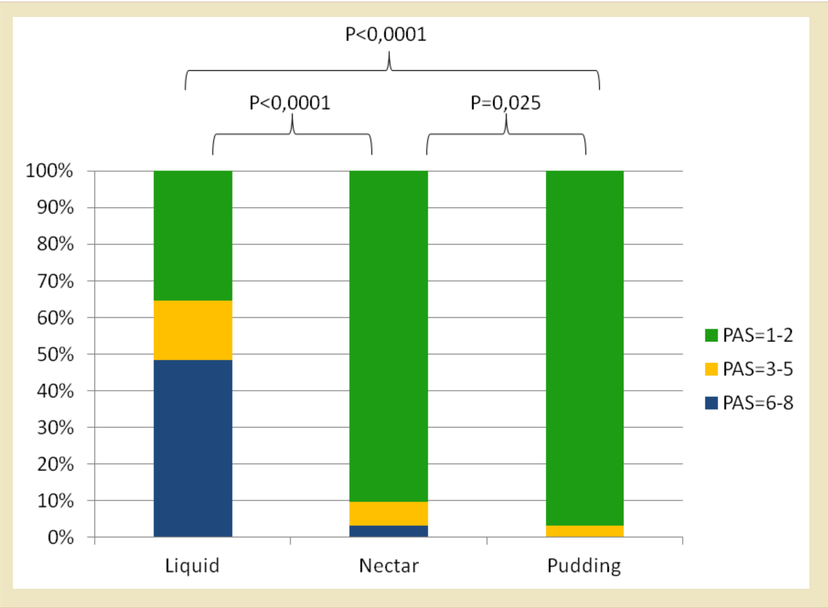

Figure 1.
Distribution of PAS scores in 37 acute stroke patients swallowing liquid, nectar thickened and pudding thickened liquid assessed in FEES.

During swallowing of liquids 14 (38%) patients presented normal finding, 7 (19%) demonstrated penetration and 16 (43%).
During swallowing of nectar thick liquid normal finding was observed in 31 (86%) patients, penetration was present in 4 (11%) of patients and aspiration was present in only 1 (3%) patient.
During swallowing of pudding thick liquid none of the subjects demonstrated penetration or aspiration.
The differences in PAS distribution between liquid and nectar or pudding condition were significant at p<0,0001, between nectar and pudding condition at p=0,025.

Conclusions

Thickening of liquids has the potential to reduce or even eliminate the risk of aspiration in acute stroke patients as assessed in FEES.

Further research is needed to deliver evidence whether this intervention can contribute to reduce the incidence of aspiration pneumonia.

References

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