The effects of a xanthan gum-based thickener on the swallowing function of patients with dysphagia.

BACKGROUND:
Increasing bolus viscosity of thin liquids is a basic therapeutic strategy to protect patients with oropharyngeal dysphagia (OD) from aspiration. However, conventional starch thickeners increase post-deglutitive residue.

AIM:
To assess the therapeutic effect of a new xanthan gum-based thickener, Resource® ThickenUp Clear (Nestlé Health Science, Vevey, Switzerland) on patients with oropharyngeal dysphagia.

METHODS:
We studied the effect of Resource® ThickenUp Clear using a clinical method and videofluoroscopy on 120 patients with oropharyngeal dysphagia (66 with stroke, 41 older and 13 with neurodegenerative diseases) and 14 healthy volunteers while swallowing thin-liquid, nectar-like and spoon-thick boluses. We assessed the prevalence of signs of impaired safety and efficacy of swallow and the physiology of the swallow response.

RESULTS:
Increasing bolus viscosity with Resource® ThickenUp Clear: (i) improved safety of swallow demonstrated by a reduction in the prevalence of cough and voice changes in the clinical study and penetrations and aspirations during video fluoroscopy. Prevalence of aspirations was 12.7% with thin liquid, 7.7% with nectar-like (P < 0.01) and 3.4% with spoon-thick (P < 0.01) viscosities. Penetration-Aspiration Scale was reduced from 3.24 ± 0.18 at thin liquid to 2.20 ± 0.18 at nectar-like (P < 0.001) and to 1.53 ± 0.13 at spoon-thick (P < 0.001) viscosities; (ii) did not enhance pharyngeal residue; (iii) nectar-like viscosity did not affect bolus velocity nor timing of swallow response and (iv) spoon-thick viscosity reduced bolus velocity.

CONCLUSIONS:
Resource® ThickenUp Clear improves the safety of swallow without increasing residue providing a viscosity-dependent therapeutic effect for patients with oropharyngeal dysphagia. At nectar viscosity, the effect is due to intrinsic texture properties, spoon-thick viscosity adding changes in swallow physiology.

This summary is prepared by Nestlé Health Science. The complete study can be accessed online at:
http://onlinelibrary.wiley.com/doi/10.1111/apt.12696/abstract;jsessionid=C457487216DE822197515A5906BAB85D.f01t01

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