Evaluation of potential risk factors for saliva volume using data from the Studies of Health in Pomerania

Lina-Ariane Arendt, Birte Holtfreter, Peter Meisel, Sylvia Stracke, Christoph Ritter, Henry Völzke, Thomas Kocher

Aims: Previous studies support a dependency of xerostomia on drugs and gender, while age did not seem to play a role. Thus, the aim of this study was to investigate associations between age, gender or drugs and saliva volume using data from the Study of Health in Pomerania (SHIP).

Methods: Data from the 11-year follow-up of the Study of Health in Pomerania (SHIP-2) and the baseline study of SHIP-Trend were pooled. Subjects were 20-93 years old. Regular medication intake was categorized as 0, 1-2 or 3+ drugs. Saliva collection was performed with commercially available Salivette® (Sarstedt, Nümbrecht, Germany). Saliva volume was determined. Multilevel methods were used to account for clustering of subjects with both SHIP surveys.

Results: In total, 6102 subjects (SHIP-2: N=2229; SHIP-Trend: N=3873) were analyzed. Mean saliva volume was 967.0 µl (SD 433.3). Saliva volumes did not differ significantly between males (975.8 µl) and females (958.7 µl; p=0.11) and according to 10-year age groups (p>0.05). However, saliva volume decreased significantly with an increasing number of regularly taken drugs (981.7, 963.2 and 954.9 µl, respectively; p trend=0.02).

Conclusions: In contrast to other studies, saliva volumes did not differ according to gender. However, negative associations with age were confirmed. Interestingly, the number of drugs regularly taken was significantly affecting saliva volume.