**Introduction** Genetic variants of the enzyme Catechol-O-Methyl Transferase (COMT) have been associated with age related degeneration and changes in dopamine function. Further, COMT gene polymorphisms have been found to interact with other genes in affecting levels of brain plasticity. We hypothesised, given the link with dopamine and brain function, interactions between polymorphisms of the COMT gene would predict dysphagia symptoms in an elderly population.

**Methods** 800 members of a genetically well characterised community dwelling elderly cohort received the Sydney oro-pharyngeal dysphagia questionnaire (1) via mail. A score of 180 or more was indicative of significant dysphagia. Saliva samples were assessed for COMT polymorphism carrier status. The carrier status of each polymorphism was investigated for association with dysphagia symptoms. Logistic regression analyses were performed in SPSS to investigate whether any of the polymorphisms under consideration were predictive of dysphagia after adjusting for age and gender, in addition to interaction effects between polymorphisms.

**Results** 688 subjects (80%) returned the questionnaire, 150 were men and 488 women and the mean age was 81.2 years. Saliva samples were then analysed for 540 of these subjects and 82 (15%) of men and 488 women and the mean age was 81.2 years. Saliva samples were assessed for COMT polymorphism carrier status. The carrier status of each polymorphism was investigated for association with dysphagia symptoms. Logistic regression analyses were performed in SPSS to investigate whether any of the polymorphisms under consideration were predictive of dysphagia after adjusting for age and gender, in addition to interaction effects between polymorphisms.

**Conclusion** We have found a novel relationship between self-reported symptoms of dysphagia and COMT status of polymorphisms rs165599 and rs10835211. Depending on their carrier status, the odds of having dysphagia can either be increased or decreased. These results also demonstrate the importance of genetic factors in age related problems, such as dysphagia.