Table 67: Hugel 2006[226] (Kass 2003[253])

Study (subsidiary papers)	Hugel 2006[226] (Kass 2003[253])
Study type	Non-randomised comparative study.
Number of studies (number of participants)	2 (n=72)
Countries and setting	Conducted in United Kingdom; Setting: Hospital.
Line of therapy	Not applicable.
Method of assessment of guideline condition	Unclear method of assessment/diagnosis.
Stratum	Overall.
Subgroup analysis within study	Not applicable.
Inclusion criteria	People with terminal advanced cancer who were managed using the Liverpool Care Pathway.
Exclusion criteria	Not described.
Age, gender and ethnicity	Age - Mean (SD): Hyoscine hydrobromide 70 (10) Glycopyrronium 71 (10). Gender (M:F): 40/32. Ethnicity:
Indirectness of population	No indirectness.
Interventions	(n=36) Intervention 1: Anti-muscarinic - Hyoscine hydrobromide. Hyoscine hydrobromide 0.4 mg subcutaneously, followed by 1.2 mg/24 hour period continuous subcutaneous injection. Duration Until death or until no longer clinically indicated. Concurrent medication/care: Other interventions on the Liverpool Care Pathway. (n=36) Intervention 2: Anti-muscarinic - Glycopyrronium bromide. Glycopyrronium bromide 0.2 mg subcutaneous followed by 0.6 mg/24-hour continuous subcutaneous injections. Duration Until death or until no longer clinically indicated. Concurrent medication/care: Other interventions on the Liverpool Care Pathway.
Funding	Funding not stated

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: GLYCOPYRRONIUM BROMIDE versus HYOSCINE HYDROBROMIDE

Protocol outcome 1: Subjective or objective improvement in respiratory secretions at hours/days
- Actual outcome: Drug response (defined as absence of symptoms) categories into: immediate (within 4 hours), late (more than 4 hours, but before death), transient

(symptom free episodes after treatment but symptoms at death), no response at Immediate; Group 1: 13/36, Group 2: 11/36; Risk of bias: Very high; Indirectness of outcome: No indirectness. - Actual outcome: Drug response (defined as absence of symptoms) categories into: immediate (within 4 hours), late (more than 4 hours, but before death), transient (symptom free episodes after treatment but symptoms at death), no response at Late; Group 1: 13/36, Group 2: 10/36; Risk of bias: Very high; Indirectness of outcome: No indirectness. - Actual outcome: Drug response (defined as absence of symptoms) categories into: immediate (within 4 hours), late (more than 4 hours, but before death), transient (symptom free episodes after treatment but symptoms at death), no response at Transient; Group 1: 10/36, Group 2: 7/36; Risk of bias: Very high; Indirectness of outcome: No indirectness. Protocol outcome 2: Adverse events (particularly paradoxical agitation, failure to expectorate, dry mouth at hours/days - Actual outcome: Agitation (Number of episodes as a proportion of all episodes) at Until death or until no longer clinically indicated; Other: Median number of agitated episodes from first observed symptoms to death: 1 (range 0-5) in the glycopyrronium and 0 (0-3) in the hyoscine hydrobromide group.; Risk of bias: Very high; Indirectness of outcome: No indirectness.	
Protocol outcomes not reported by the study	Quality of life at hours/days; Hospitalisation at hours/days; Subjective ratings from people on distress related to noisy breathing /respiratory secretions at hours/days; Sedation (patient-rated, clinician-rated, carer-rated) at hours/days; Subjective ratings from informal carers' on distress relating to noisy breathing/respiratory secretions at hours/days; Hydration status at hours/days; Length of survival at hours/days; Length of stay at hours/days.