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The predictive value of a computer-guided consultation in suspected Obstructive Sleep Apnoea Syndrome

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Introduction: Obstructive Sleep Apnoea Syndrome (OSAS) is increasing in prevalence and is often undiagnosed.

Aims and objectives: This study evaluates the predictive value of a novel computer-guided consultation in accurately diagnosing suspected OSAS cases referred into a regional sleep service.

Methodology: Subjects referred with suspected OSAS were initially evaluated by a medical practitioner, using the Guided Consultation (GC) and blinded to any Sleep Study results. The GC prompts history taking, examination, investigations and then suggests a treatment plan. The suspected diagnosis & proposed management plan reached by the GC prior to the sleep study was subsequently referenced for each subject by an independent researcher and compared with the "final diagnosis" reached by an experienced specialist sleep physician supported by sleep studies.

Results: 90 subjects [63% male, mean(SD) age 52 (12) years; ESS 10(6);BMI 36 (10)] with suspected OSA/OSAS were studied; a diagnosis of OSA/OSAS was made in 87% (78/90). The GC correctly predicted the occurrence of "Probable" or "Possible" OSAS from the history and examination alone and subsequently recommended sleep studies in 95% (74/78) of subjects who were ultimately diagnosed with OSA/OSAS by the Sleep Specialist. The sensitivity of the GC in diagnosing Probable/Possible OSA(S) prior to sleep testing was 94.87% (95% CI 87.39-98.59%) carrying a positive predictive value of 92.50% (95% CI 87.48-95.61%).

Conclusions: Initial results suggest a computer-guided consultation accurately predicts the presence of OSA/OSAS; this has the potential to modify existing pathways and enable diagnostic capability in more general non specialist settings.