ASSOCIATION BETWEEN CENTRAL PRECOCIOUS PUBERTY
AND COMORBID MEDICAL ILLNESS: LARGE-SCALE
RETROSPECTIVE CLAIMS ANALYSIS OF FLORIDA
MEDICAID-ENROLLED CHILDREN

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OBJECTIVES: Central precocious puberty (CPP) causes premature childhood development of secondary sexual characteristics and accelerated growth and bone maturation. A small body of research links CPP with increased risk for CNS and congenital disorders, but little is known about the association of CPP with other medical conditions. We examined potential associations.

METHODS: Seven-year (1997–2004) analysis of Florida Medicaid-enrolled children comparing those aged 3–7 years with precocious puberty (ICD-9 259.1), which may include premature adrenarche) to those without (age-, sex-, race-, year-, disease burden-matched). ICD-9 diagnoses were used to classify disease groups and disease burden (Charlson Index). Fisher’s exact test examined differences between groups and logistic regression examined likelihood estimates. RESULTS: Among 720,931 children, 1,644 (0.23%) were diagnosed with CPP. There was a significant difference in disease burden between groups (p < 0.0001). After adjustments, compared to Medicaid-enrolled children without the disorder, those with CPP were 6 times more likely to be diagnosed with hemiplegia (OR 6.3, 95% CI 3.8–10.4, p < 0.0001); 5 times more likely to be diagnosed with cerebrovascular disease (OR 5.1, 95% CI 3.2–8.1, p < 0.0001) or moderate or severe renal disease (OR 4.7, 95% CI 2.2–9.9, p < 0.0001); 4 times more likely to be diagnosed with congestive heart failure (OR 3.9, 95% CI 2.1–7.0, p < 0.0001), connective tissue disease (OR 3.7, 95% CI 1.4–9.8, p = 0.009), or diabetes (OR 3.5, 95% CI 2.0–6.2, p < 0.0001); and 3 times more likely to be diagnosed with chronic pulmonary disease (OR 3.1, 95% CI 2.2–4.3, p < 0.0001) or AIDS (OR 2.8, 95% CI 1.6–4.9, p = 0.0002). CONCLUSION: This is the first large-scale analysis to show an association between ICD-9 claims-based diagnoses of CPP and medical comorbidities. The pathways by which these comorbid conditions may co-occur remain unclear. Given the potential for complex medical comorbidity, patients with CPP may benefit from thorough evaluation for co-occurring medical disorders.

ENDOMETRIOSIS: COST ESTIMATES AND METHODOLOGICAL PERSPECTIVE

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OBJECTIVES: The aim of this study is, first, to provide a systematic review of the international literature exploring endometriosis costs and, second, to calculate endometriosis costs in the US population. The review determines the level and drivers of endometriosis costs; appraises the methodological quality of cost studies; and proposes directions for designing future studies of endometriosis costs. METHODS: Information about endometriosis costs was derived from cost-of-illness analyses and cost analyses. A data extraction form and quality appraisal form was completed for each study. The calculation of endometriosis costs in the US population was based on estimates of (in)direct costs and endometriosis prevalence as derived from published sources. All costs were expressed in 2002 US dollars. RESULTS: The review indicated that annual health care costs and costs of productivity loss associated with endometriosis have been estimated at $2801 and $1023 per patient, respectively. Extrapolating these findings to the US population, this study calculated that annual costs of endometriosis attained $22 billion in 2002 assuming a 10% prevalence rate among women of reproductive age. To date, it is not possible to determine whether a medical approach is less expensive than a surgical approach to treating endometriosis in patients presenting with chronic pelvic pain. Evidence of endometriosis costs in infertile patients is largely lacking. Cost estimates were biased due to the absence of a control group of patients without endometriosis, inadequate consideration of endometriosis recurrence, and restricted scope of costs. There is a need for more and better-designed studies that carry out longitudinal analyses of patients until the cessation of their symptoms or that model the chronic nature of endometriosis. CONCLUSION: Our estimated costs of endometriosis in the US population are considerable, underlining the need for further research into cost-effective approaches to diagnosing and treating endometriosis.