

Tics in ADHD

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ADHD is very common in people with tics: at least 50% of children with tics also have ADHD [1]. What about the other side? That is, how common are tics in children with ADHD? Previously I would have said, “well, more common than in kids without ADHD” [2]. That statement is true, but dramatically understates the situation.

The best data we have comes from two randomized, controlled treatment studies of ADHD, because they observed the children prospectively for tics, blind to treatment assignment. Law and Schachar [3] carried out a careful, randomized controlled trial of methylphenidate for ADHD, lasting 1 year, in 91 children with tics (age 8). They monitored carefully for tics. Children who at the beginning of the study had “a severe motor or vocal tic disorder or Tourette’s disorder,” or who had been treated for tics, were not allowed to participate. Still, mild to moderate tics were observed in 30% of children at the start of the study (27 of 91). During the next year, 12 of the children *without* tics at the start of the study developed “clinically significant tics for the first time (*i.e.*, moderate or worse).” This rate was essentially the same in children on or off methylphenidate—in other words, the risk factor is ADHD, not the stimulant. By the end of the study, more than 43% of children with ADHD had tics. We can say “more than” for at least three reasons. First, children with “severe” chronic tics or a history of treatment for tics were excluded from participation. Second, children who developed mild tics for the first time during the year of follow-up were not counted. Third, they diagnosed tics based on reports from parents and teachers—with careful questioning by trained research staff—but only supplemented by direct examination at the research visits if tics were reported to be “moderate,” “severe,” or “Tourette-like.” We know from our recent New Tics study and previous research that many tics not recognized by parents or teachers are identified when the child is observed by clinicians or trained research staff [4]. For all these reasons, probably even more children with ADHD had tics than the 43% reported by Law and Schchar.

Spencer and colleagues [5] reported on a large sample of boys with ADHD. 34% had a tic disorder at the start of the study, and 20% of the remaining boys developed tics at follow-up, so that by the end of the study half of the boys (64 of 128) had a current or past tic disorder. (In boys without ADHD, only 10 of 110 had a tic disorder by the end of the study.) The positive news was that tic disorders remitted faster than ADHD did. These diagnoses were based on DSM-III-R, which required impairment in a life role or marked distress to diagnose a tic disorder. Presumably rates would have been even higher if less bothersome tics were counted.

A cross-sectional study performed face-to-face, semi-structured diagnostic interviews in children that teachers and parents identified as having possible ADHD or tics, and found a *chronic* tic disorder in 57% of children diagnosed with ADHD [6]. A more recent report found tics to be 4-6 times more common in children with *vs.* without ADHD, and the children with tics tended to have more clinical problems and lower quality of life [7]. Interestingly, over 3 decades ago, Comings et al. concluded from clinical experience that about half of children seen for ADHD (only) either had motor or vocal tics or a relative with TS [8,9].

These careful studies suggest that **most** children with ADHD have tics at some point in their life.

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