Question: 218

You are examining a 9-year-old boy who has a soft, but distinctly palpable 2-cm nodule on the left lobe of his thyroid. It moves with swallowing. You arrange for thyroid fine-needle aspiration biopsy with ultrasonographic guidance.

Of the following, the MOST appropriate information to share with the family is that

A. all thyroid nodules in boys should be removed because they have a higher risk of malignancy than nodules in girls

B. no further follow-up is necessary if the pathology report suggests a benign thyroid adenoma

C. there is a 50% chance that the thyroid nodule will be malignant

D. the biopsy offers a greater than 90% chance of determining whether a thyroid nodule is benign or malignant

E. thyroid nodules in girls are more likely to be malignant than nodules in boys
Thyroid fine-needle aspiration (FNA) biopsy, usually conducted under ultrasonographic guidance, has revolutionized the management of thyroid nodules in adults. Depending on the series, almost all malignancies are identified by aspiration biopsy (more than 95%), although some malignancies cannot be diagnosed easily on FNA smear, and an area of malignancy may be missed in a complex nodule. Nodules may be simple and cystic, simple and composed of follicular or papillary tissue, or complex and composed of some areas that are cystic and other areas with follicular or components. Calcitonin-secreting medullary carcinoma of the thyroid also may present as a nodule and is most worrisome because of its resistance to therapy. Less than 10% of thyroid cancers in children are medullary carcinomas. The risk of malignancy in an adult who has a thyroid nodule is less than 15%.

Because most thyroid carcinomas progress slowly, watchful waiting and careful observation after biopsy may be all that is needed in the average adult. The results of FNA seem similar in children, but the greater likelihood of a malignant lesion (a little less than 25%) and the longer life span of children make many endocrinologists uncomfortable with observational management after a negative biopsy. The risk of malignancy is higher in boys who have thyroid nodules, but the general risk still is slightly less than 25% of all nodules in children. Any nodule that is not removed should be monitored because an area of malignancy in a complex nodule could have been missed.

References:

