Review of: "Strategies for Management and Long-term Surveillance of Pediatric Differentiated Thyroid Cancer: Balancing Efficacy and Quality of Life"

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Potential competing interests: No potential competing interests to declare.

This is a kind of literature review on differentiated thyroid cancer in children. The author wants to draw parallels between childhood and adult thyroid cancer in terms of epidemiology, diagnosis, treatment, complications, prognosis, and quality of life. It shows concern for the implementation of individualized care, taking China and the United States of America as a reference.

The work needs some adjustments. How can you publish a literature review without references that support your claims?

Your text is poor in references; for example, in the introduction, your first 3 sentences say things without references.

Introduction

Question 1 : Can you specify the place or rank of thyroid cancer in the total of all childhood cancers in China and the United States? If you can add it to your work.

Even though you work on China and the United States, I would have liked you to talk in a few lines about the prevalence of this cancer in children in the United States, China, a country in Europe (France), and Africa?

Question 2 : Can you add something about this prevalence worldwide ?

Question 3 : Can you give the ratio of women to men?

In terms of the incidence of this cancer, I think that we must blame the technological development with very sophisticated medical imaging devices and nuclear medicine, allowing the detection of even micro-cancers.

According to this phrase : The incidence of thyroid cancer in older children does not have the same …

Question 4 : Can you give these differences ?

As far as risk factors are concerned, it should be noted that we must not forget the influence of the environment with the irradiation emitted in imagery, in nuclear medicine, iodine deficiency, but also ores and heavy metals as a whole, endocrine disruptors, and genetic mutations under the influence of environmental factors.

In the section "Epidemiology of Pediatric Thyroid Cancer,"

In the section, you write more than 10 sentences without a reference; your text becomes a narration, but these are sentences and quotes that are supposed to come from the literature. This causes the quality of the work to be lost.

Question 5 : Where are the references for all these sentences that follow in this paragraph :

In recent years, an important set of epidemiological data on pediatric thyroid cancer has come from a screening project in Japan. The screened population was children under 18 years old, and the study found no difference in incidence rates between areas with high, medium, and low radiation levels, with most cases concentrated among 12-18 year olds. The incidence of thyroid cancer in older children does not have the same characteristics. Therefore, some scholars suggest that the incidence of pediatric thyroid cancer is strongly related to age and less so to other factors.

Clinical, Pathological, and Molecular Characteristics

Question 6 : Where are references for all of the following phrases ?

In pediatric thyroid cancer, papillary thyroid cancer (PTC) is the most common, with a higher proportion of diffuse sclerosing and tall cell subtypes compared to adults; follicular thyroid cancer (FTC) accounts for 5% to 10%; while medullary thyroid cancer (MTC), poorly differentiated thyroid cancer (PDTC), and anaplastic thyroid cancer (ATC) are relatively rare. Pediatric MTC may appear as part of multiple endocrine neoplasia type 2 (MEN2).

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Compared to adults, pediatric thyroid cancers are more often multifocal and more likely to have distant metastases at diagnosis. Studies have reported that a high proportion of pediatric thyroid cancers have lymph node metastases at diagnosis, with pulmonary metastases occurring in 8% to 29% of cases, potentially related to age, tumor size and number, and extrathyroidal invasion.

In pediatric thyroid cancer, gene fusions are more common than point mutations, with a higher occurrence rate of RET/PTC than in adults, while the BRAF mutations common in adult thyroid cancers are less frequent in children. Recent studies show that in pediatric thyroid cancers with distant metastases, the most common genetic alterations are RET gene fusions and NTRK1/3 gene fusions, while BRAF mutations account for only 19%. These molecular characteristics suggest that pediatric thyroid cancers may have a different molecular basis.

Question 7 : Can you specify the proportion of papillary cancer compared to other histological types in children?

Question 8 : Can you give an explanation of the fact that childhood cancer is multifocal and often associated with métastasis?

Tumor Prognosis

Question 9 : Where are the references for the following phrases :

The 10-year survival rate for children with DTC is as high as 95%, and the thyroid cancer-related mortality rate after 40 years of follow-up is only 6%. A follow-up study on pediatric thyroid cancer patients reported an overall 15-year survival rate of 99%, with no statistical difference in overall survival rates among different histological types of tumors.

Although the mortality rate of pediatric thyroid cancer is low, the potential impact of this disease on children should not be underestimated. The risk of recurrence in pediatric thyroid cancer is higher than in adults, with literature reporting high 5-year and 10-year recurrence rates. Thyroid cancer can recur even 30 to 40 years after the initial diagnosis, so patients may require lifelong monitoring and follow-up.

Question 10 : Can you say a word about the attitude advocated by the Chinese and Americans on unilobar micro-cancers?

Question 11 : What precautions are taken for this paediatric population with regard to their fertility after the use of radioactive iodine?

Question 12 : What is proposed for the psychological care of these children who need surgery, followed by iodine with the risk of infertility?