

Pineal cyst during pregnancy and labor

- case report -

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Abstract

With the advent of modern diagnostic tools for neuroimaging, the incidental detection of pineal cysts in asymptomatic subjects has increased. We report a case of asymptomatic pineal gland cyst of 23-years old pregnant women. The first diagnosis of the cyst was made by a MRI examination before her second pregnancy in 2005. The pineal cyst was found to be 15 mm in diameter. Since then, she was followed by neurosurgeons without any complications or symptoms until her current pregnancy. At the last MRI scan from 2009, 4 years later, the pineal cyst was found to have no changes in size or location. Following birth, the patient remained asymptomatic and no further problems were occurred during the postpartum period.

Keywords: pineal cyst, pregnancy, labor

Introduction

Pineal cyst is a very rare condition in pregnancy. However, it is often asymptomatic during pregnancy with a rare incidence of complications during labor^(1,2). Pineal cysts are actually anatomical variants of the normal pineal gland with diameters ranging from 2 to 15 mm^(3,4). They are rarely symptomatic, and therefore rarely require treatment^(5,6) being described with increasing frequency since the advent of magnetic resonance imaging (MRI)⁽¹⁾. Several retrospective studies of consecutive MRI scans showed that the prevalence of the cysts ranges from 1.5 to 10.8 %^(3,4,5,7,8) with a higher incidence in females⁽⁹⁾. Although there are studies reporting the effect of pineal gland cysts on reproductive system in the literature⁽¹⁰⁻¹²⁾, there is scarce information regarding its effect and course during pregnancy and labor.

We report a case of pineal gland cyst during pregnancy and labor. The diagnosis, its course and effect on pregnancy and the outcome of the pregnancy and labor are discussed.

Case Report

A 23-year-old pregnant woman was admitted to our antenatal outpatient clinic during her current pregnancy at seven weeks of her gestation. The first diagnosis of the cyst was made by a MRI examination before her second pregnancy in 2005. The pineal cyst was found to be 15 mm in diameter. Since then, she was followed by neurosurgeons without any complications or symptoms until her current pregnancy. At the last MRI scan from 2009 (figure 1), four years later, the pineal cyst was found to have no changes in size or location.

Her first antenatal examination was normal with normal routine blood and urine tests. She was followed monthly in our antenatal outpatient clinic and quarterly by neurosurgeons team during her current pregnancy until the 39th week. At this moment, she was admitted to our labor and delivery ward with active labor with a 4 cm dilated and 60% effaced cervix.

Under continuous fetal monitoring, oxytocin augmentation was performed during the labor until the full efface-

ment and dilatation was reached. Her labor was uneventful with no symptoms and complications attributed to the pineal cyst and she gave birth to a healthy 2820 g baby.

Following birth, the patient remained asymptomatic and there weren't any problems regarding postpartum period or lactation.

Discussions

Although pineal gland cysts are not uncommon tumors, their real incidence during pregnancy is unknown. The reason of this dilemma is probably due to the asymptomatic nature of these cysts, while they are often diagnosed incidentally. Although some women may have a pineal gland cyst during their pregnancy, it remains unrecognized as they don't cause any symptoms. Therefore, our data about the clinical course of these cysts during pregnancy and labor are extremely scarce.

Sevitt and Schorstein published a case of large symptomatic pineal cyst during pregnancy and stated that the association between pineal cyst and pregnancy may be no more than a coincidence, but the pregnancy might have caused a change in the size of the cyst⁽¹³⁾. However, lack of many publications regarding the effect of pineal gland cysts on pregnancy or reverse suggests that the relationship between pineal cysts and pregnancy is not much unfavorable.

Pineal cysts are often rarely symptomatic. The clinical symptoms related with pineal gland cysts include headache, vertigo, vomiting, diplopia, blurred vision, hemiparesis, epilepsy, papilledema, oculomotor nerve paresis, lethargy, coma, until death⁽¹⁴⁻¹⁶⁾. When symptoms are present, however, are usually noted in patients with cysts larger than 15 mm in diameter^(17,18). In the presented case, lack of any symptoms attributed to pineal gland cyst may be related to relatively small size of the cyst. Although the patient had suffered from sleep disorder during her current pregnancy, it is difficult to say whether it is related directly to the pineal gland cyst or to the pregnancy itself. Furthermore a cyst, which was

known as asymptomatic before and remain asymptomatic during pregnancy suggest that pregnancy has minimal or no effect at all on the natural behavior of the cyst.

The effect of pineal gland cysts on reproduction is obscure. It has been reported that it was rarely associated with polycystic ovary syndrome like clinical picture⁽¹¹⁾ and precocious puberty^(10,12) but no association between pineal cysts and ovulation or pregnancy have been reported. Two successful term pregnancies in five years reflect that pineal gland cysts have no apparent effect on reproduction during the childbearing age.

Pineal gland cysts do not have tendency to enlarge and may remain unchanged in size for years^(19,20). In the presented case, since the first diagnosis in 2005, to the end of her last pregnancy (4 years later), no change in the size of the pineal cyst was determined with serial MRI assessments. Furthermore, it should be noted that this patient had experienced two term pregnancies until the first diagnosis, which may show that pregnancy may have no apparent effect on the cyst size. Although Sevt and Schorstein⁽¹³⁾ have reported that pregnancy may cause a change in the pineal cyst that was present before, we did not experienced any changes in the size or shape of the cyst during the follow-up period.

We can conclude that, the course of pregnancy was not affected by the pineal gland cyst and the pineal cyst did not seem to be affected by pregnancy either. Additio-



Figure 1. MRI scan of a 23-year-old pregnant woman with a pineal gland cyst

nally, the patients with asymptomatic pineal gland cysts are likely to have an uneventful pregnancy and to give a normal birth. ■

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