Title
Mechanism and clinical significance of elevated CA125 levels in the sera of pregnant women

Author(s)
Kobayashi, Fuminori

Citation
Kyoto University (京都大学)

Issue Date
1993-11-24

URL
https://doi.org/10.11501/3073211

Type
Thesis or Dissertation

Textversion
author
Kyoto University
Mechanism and clinical significance of elevated CA125 levels in the sera of pregnant women

(妊娠血清中におけるCA125増加の機序と臨床的意義)

小林 史典
Mechanism and clinical significance of elevated CA 125 levels in the sera of pregnant women

Fuminori Kobayashi, MD, Norimasa Sagawa, MD, Kousaku Nakamura, MD, Masafumi Nonogaki, MD, Chiaki Ban, MD, Shingo Fujii, MD, and Takahide Mori, MD

To clarify the mechanism of CA 125 elevation in maternal sera, serum levels of CA 125 and CA 19-9 were measured in 122 apparently healthy pregnant women (fifth to fortieth week of gestation) and 50 postpartum women (26 term deliveries and 24 second-trimester induced abortions). Serum levels of CA 125 showed an initial increase by the tenth week and then decreased to <35 U/ml, remaining below this level until delivery. However, within 1 hour after term delivery or second-trimester induced abortion, the CA 125 levels showed a second increase and decreased rapidly thereafter. In contrast, serum levels of CA 19-9 did not change significantly during these periods. Combined with our previous finding that the decidua contains abundant CA 125 but little CA 19-9, these results indicate that the elevated CA 125 levels in maternal sera originate from the decidual cells affected by chorionic invasion or the placental separation. (Am J Obstet Gynecol 1989;160:563-6.)

Key words: CA 125, CA 19-9, delivery, maternal sera, pregnancy

CA 125 is a glycoprotein detected by the monoclonal antibody OC 125, which is prepared by somatic cell hybridization of spleen cells from mice immunized with an epithelial cell line derived from an ovarian cystadenocarcinoma and is widely used in the clinical diagnosis of ovarian malignancies. It has also been reported that serum levels of CA 125 are elevated during menstruation or early gestation. The sources of CA 125 and its clinical significance have not been clarified.

Recently we found that glycoproteins CA 125 and CA 19-9 are both present in relatively high concentrations in amniotic fluid and amnion cells. Furthermore, we observed that decidual cells also contain abundant CA 125 but little CA 19-9. In this study, we measured changes in the serum levels of both CA 125 and CA 19-9 throughout pregnancy and after delivery to clarify the sources and clinical significance of the elevated serum levels of CA 125 observed during pregnancy.

Material and methods

Two hundred fourteen blood samples were obtained from 122 apparently healthy pregnant women during the fifth to fortieth week of pregnancy, from 26 women