Expression of programmed cell death – ligand 1 in Thai epithelial ovarian/fallopian tube/primary peritoneal carcinoma patients

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Purpose

To evaluate the proportion of expressed of programmed cell death-ligand 1 (PD-L1) in Thai epithelial ovarian/fallopian tube/peritoneal carcinoma patients, and the association with the clinicopathological and surgical outcomes.

To compare PD-L1 protein expression by immunohistochemistry (IHC) staining with mRNA expression by quantitative reverse transcription polymerase chain reaction (RT-qPCR) methods.

Material and methods

Case suspected ovarian/fallopian tube or primary peritoneal carcinoma

N = 145

November 2016 - February 2018

Inform consent

Operation

Collected fresh specimens (same area)

Inclusion criteria

- Aged 18 to 80 years old
- Underwent to exploratory laparotomy which diagnosed is suspected ovarian/ fallopian tubes or primary peritoneal carcinoma in Siriraj Hospital
- Communicate effectively in Thai
- Informed consent

Block slide for IHC *1

Tissue size 1 x 1 x 0.5 cm

RNA storage solution for RT – PCR *5

Tissue size 0.5 x 0.5 x 0.3 cm

Main specimen for pathologist

IHC for PD – L1, DAKO 28 - 8

RT – PCR for PD – L1

Pathological report : EOC

Exclusion criteria = 24

Pathological report : non EOC and benign condition

N = 100

Exclusion criteria = 21
Tumor cells on tissue microarray < 100 cells

Results

Histopathology

Others, 7%
Mixed type CA, 5%
Endometrioid CA, 16%
Clear cell CA, 29%
Serous CA, 42%

★ PD-L1 positive cancer cell expression = 23%

★ The median expression of normalized mRNA = 0.015 [0.004-0.037]

* The Spearman correlation coefficient between protein and mRNA expression was 0.041, ($p = .45$) *

Conclusion

❄ There was a **low expression** of PD-L1 protein/mRNA in epithelial ovarian/fallopian tube/primary peritoneal carcinoma

❄ There was a weak correlation of PD-L1 protein/mRNA expression