KASUS CRP

TUTORIAL A 2

KASUS

- SEORANG IBU HAMIL 2 BULAN MENGELUH MUAL DAN MUNTAH. SELAMA KEHAMILANNYA ITU , SI IBU DATANG KE DOKTER DAN INGIN MENDAPATKAN OBAT MENGHILANGKAN MUAL DAN MUNTAHNYA TANPA MENGGANGGU JANINNYA.

TITLE: THE SAFETY OF METOCLOPROMIDE USE IN THE FIRST TRIMESTER OF PREGNANCY.

JURNAL: THE NEW ENGLAND JOURNAL OF MEDICINE

AUTHOR: ILAN MATOK,M.Sc.Pharm, RAFAEL GORODISCHER, MD, GIDEON KOREN, MD, EYAL SHEINER, MD, PhD, ARNON WIZNITZER,MD & AMALIA LEVY, MPH PhD.

BACKGROUND

- THIS DRUD PRESCRIBED AS ANTIEMETIC FOR PREGNANT WOMEN BUT INSUFFICIENT INFORMATION EXISTS REGARDING TO ITS SAFETY IN PREGNANCY.

METHODS

- BY LINKING A COMPUTERIZED DATABASE OF MEDICATIONS DISPENSED BETWEEN JAN 1, AND MARCH 31, 2007 TO ALL WOMEN REGISTERED IN THE CLALIT HEALTH SERVICES, SOUTHERN, WITH COMPUTERIZED DATABASES CONTAINING MATERNAL AND INFANTS RECORDS. JUDGEMENT IS ADVERSE OUTCOMES FOR THE FETUS.

RESULTS

- THERE WERE 113 612 SINGLETONS BIRTHS DURING THE STUDY PERIOD. A TOTAL OF 81703 OF INFANTS WERE BORN TO WOMEN REGISTERED TO THE PLACE. 3458 OF THEM WERE EXPOSED TO THE DRUG. EXPOSURE TO METOCLOPRAMIDE, AS COMPARED WITH NO EXPOSURE TO THE DRUG, WAS NOT ASSOCIATED WITH SIGNIFICANTLY INCREASED RISKS OF MAJOR CONGENITAL MALFORMATIONS.

CONCLUSION

- IN THIS LARGE COHORT OF INFANTS, EXPOSURE TO METOCLOPRAMIDE IN THE FIRST TRIMESTER WAS NOT ASSOCIATED WITH SIGNIFICANTLY INCREASED RISKS OF ANY SEVERAL OUTCOMES.

Validity

- Were there clearly defined group of patients, similar in all important ways other than exposure to the treatment or other cause?
  - Yes. The population of the study are all girls and women aged 15-49 years old who were registered in Clalit Health Services and were living in the Beer-Sheva district and who had singleton delivery at Soroka Medical Center (study population, paragraph 2, page 2529)

- Were treatment/exposures and clinical outcomes measured in the same ways in both groups (was the assessment of outcomes either objective or blinded by exposures)?
  - Yes. The study was a retrospective cohort study and the assessment was objective as the data were collected from a computerized data.

- Was the follow-up of study patients sufficiently long and complete?
  - Yes. The follow up was long as it was stopped until the end of study where patients are diagnosed with clinical upper gastrointestinal events and rates of medication adherence were more than 90% in 2 subgroups of cohort (discussion, paragraph 6, page 2533)
- Do the results satisfy some ‘diagnostic tests for causation?’
- Is it clear that the exposure preceded the onset of the outcome?
  - Yes. Outcomes occurs after the exposure of metoclopramide

- Is there a dose-response gradient?
  - No. No significant dose-response effect in the association between metoclopramide and the risk of major congenital malformations (outcomes, paragraph 4, page 2532)
- Is there positive evidence from a ‘dechallenge-rechallenge’ study?
  - Yes. There were neither increasing nor decreasing of dosage of metoclopramide in this study

- Is the association consistent from study to study?
  - Yes. Their findings are consistent with the results of those studies and the absence of a significant association in their study between exposure to metoclopramide during first trimester and low birth weight, very low birth weight and preterm birth is also consistent with the findings in most of the previous, smaller studies (discussion, paragraph 2, page 2533)
- Does the association make biological sense?
  - Yes. Because it does have some associations with the exposure.

Are the valid results from this harm study important ?

1. What is the magnitude of the association between the exposure and outcome?

   = Relative risk (RR) : 1.07

2. What is the precision of the estimate of the association between exposure and outcome?

   = high

FOR MAJOR CONGENITAL MALFORMATION		ADVERSE OUTCOME		TOTALS
		PRESENT (CASE)	ABSENT (CONTROL)	
EXPOSED TO THE TREATMENT	YES (COHORT)	182	3458	3458
	NO (COHORT)	3834	74411	78245
TOTALS		4016	77869	

$$\text{Relative Risk (RR)} = \frac{a}{a+b} : \frac{c}{c+d}$$

$$= \frac{182}{3458} : \frac{3834}{78245}$$

$$= 0.05263 : 0.0490$$

$$= 1.074$$

$$\text{NNH} = \frac{1}{\frac{a}{a+b} - \frac{c}{c+d}}$$

$$= \frac{1}{0.05263 - 0.0490}$$

$$= \frac{1}{3.63 \times 10^{-3}}$$

$$= 275.48$$

FOR MINOR CONGENITAL MALFORMATION		ADVERSE OUTCOME		TOTALS
		PRESENT (CASE)	ABSENT (CONTROL)	
EXPOSED TO THE TREATMENT	YES (COHORT)	133	3325	3458
	NO (COHORT)	2730	75515	75515
TOTALS		2863	78840	

$$\text{Relative Risk (RR)} = \frac{a}{a+b} : \frac{c}{c+d}$$

$$= \frac{133}{3458} : \frac{2730}{78245}$$

$$= 0.03846 : 0.03489$$

$$= 1.10$$

$$\text{NNH} = \frac{1}{\frac{a}{a+b} - \frac{c}{c+d}}$$

$$= \frac{1}{0.03846 - 0.03489}$$

$$= \frac{1}{3.57 \times 10^{-3}}$$

$$= 280.1$$

APPLICABILITY

do these results apply to our patient ??

1) Is our patient so different from those in the study that its result don't apply ?

   Jawaban : tidak, karena kondisi pasien hampir sama kecuali etnisnya

2) What are our patient's risk of the adverse event ?

   Jawaban : kelainan kongenital major dan minor

3) What are our patient's preference , concerns and expectation from this treatment ?

   Jawaban : keluhan mual dan muntah hilang tetapi tanpa efek samping terhadap janin

4) What alternative treatment are available?

   Jawaban : obat alternatif lain yaitu piridoxin