Writing the Results

Philippine Council for Health Research and Development
Philippine Association of Medical Journal Editors
Asia Pacific Association of Medical Journal Editors

National Medical Writing and Review Workshop

Marriott Hotel, Cebu City, January 19-20, 2012

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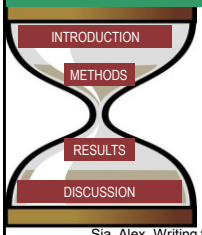
Writing the Results



Introduction → Why did we start?

Methods → What did we do?

Results → What did we find?

Discussion → What does it mean?

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Writing the Results

At the end of this session, you will learn:

- **The purpose and process of writing the results**
- **Common errors in writing the results**

OBJECTIVES

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Writing the Results

Purpose

- **To present the main data collected and the observations made during the research.**
- **Results:**
  - present the analysed data without discussing it
  - guide the reader through the questions investigated in the study
  - set the stage for the discussion (next section).

Ng KH, Peh WCG,. Effective medical writing (Pointers to getting your article published): Writing the Results. *Singapore Med J 2008; 49(12): 967-969.*

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Writing the Results

Process

- Review the analysed data and determine which results to present
- Do not present ALL results obtained or observed.
- Decide which results are relevant to the question(s) presented in the introduction whether or not they support the hypothesis.
- Do not include details on methods, materials or discussion and conclusions.

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Writing the Results

Process

- Report outcomes for each item in materials & methods
- Do not report results for items that are not listed in materials and methods
- Summarize data, especially numbers and statistics
- Do not report raw data
- Supplement with illustrative tables and figures.
- If you show, don't tell

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RESULTS

Mother's ages range in selective samples are 21-54 years (mean age 31 years) and 84% of them were literate with minimum criteria of being able to read or write.

97 % were aware of advantages of breastfeeding. All of them initiated breast-feeding in initial days but later on they quitted breast-feeding before 2 years.

The result of survey showed a major reason (54 %) behind the discontinuation of breast-feeding at early period is having "not enough milk" in their breasts. Among these mothers ,32% think that their small breast size is responsible while remaining mothers think the cause is their poor body nourishment either due to having some disease (28 %) or can not affordable to purchase extra food needed for their nourishment.

The second major reason (23 %) say that their babies were not feeling well after receiving their breast milk. Among them 40 % had pain abdomen, 36 % gas formation and 25 % noticed abnormal bowel habits in their babies.

Other reasons discovered in this study are that their babies were still feeling hungry after breast fed (10 %), difficult to give enough time for lactation as doing work outside home (6 %), fear of loss of physical attraction (4 %) and milk dried up (3 %)

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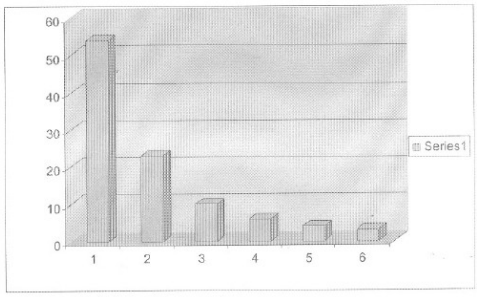
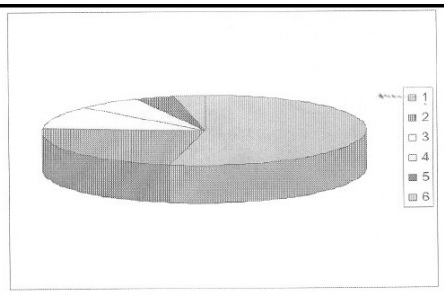
FACTORS	NUMBER OF OBSERVATION	PERCENTAGE
Not enough milk	95	54
Bay not feeling well after breast fed	40	23
Baby feeling hungry after breast fed	18	10
Not enough time for lactation as doing work outside	11	6
Fear of loss of physical attraction	7	4
Milk dried up	5	3
Total	176	100

Figure 1



1 = Not enough milk
2 = Baby not feeling well after breast fed
3 = Baby feeling hungry after breast fed
4 = Not enough time for lactation as doing work outside
5 = Fear of loss of physical attraction
6 = Milk dried up



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Writing the Results

Common Errors

- **Illogical sequence of data presentation**
- **Inaccurate data**
- **Repetition of data**
- **Expected data from the materials and methods section not reported**

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Common Errors

- **Misplaced information between the materials and methods and results sections**
- **Inappropriate presentation of data – overuse and abuse of tables and figures**
- **Attempts to draw conclusions – should be covered in the discussion section**

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Writing the Results

Common Errors
Avoid the squid technique

" the author is doubtful about his facts or reasoning and retreats behind a protective cloud of ink."
Doug Savile

Clearihan Lyn. Writing for Publication. Monash Uniiversity, Melbourne. Available from: http://www.phcris.org.au/conference/2005/workshops/clearihan.pdf

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Writing the Results

Take home points:

1. Present relevant data collected from the experiment.
2. Present the main results without going into the discussion and conclusion.
3. Prepare the analysed data in the form of a table, figure, **or** in text form.
4. Write in PAST tense

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Writing the Discussion

University of the Philippines Manila
College of Medicine – Philippine General Hospital
Department of Otorhinolaryngology

ORL Medical Writing Skills Workshop

Buenafe Auditorium, UPCM Manila, November 9, 20

JF Lapeña Jr. M.A., M.D., F.P.C.S.
lapenajf@upm.edu.ph

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Writing the Discussion

At the end of this session, you will learn:

- **The purpose and process of writing the discussion**
- **How to write the discussion and tell a good story**

OBJECTIVES

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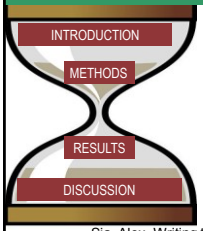
Writing the Discussion



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Writing the Discussion

Perspective: Putting it together

INTRODUCTION: Tell them what you are going to say

- Introduction (Why did we study?)

BODY: Say it

- Methods (Who, What, When, Where and How did we study?)
- Results (What did we find?) And
- Discussion (What do the findings mean?) AND

CONCLUSION: Tell them what you said

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Writing the Discussion

'Here is why our findings are remarkable… '

Writing the Discussion

1. Compact the conclusion

Summarise the most important finding
Conclusion of the primary outcome

Writing the Discussion

2. Comparison to and consistency with other studies

Our study show that there are differences… possible reasons for the differences are…

Our study is consistent with studies X,Y,Z in the findings of…

Writing the Discussion

3. Plausible explanations

Scientific pathway in explanation
Basic science linkage or relationship

Writing the Discussion

4. Implications

Clinical implications
Research implications

What is the next step for future research?

Writing the Discussion

5. Limitations and caveats to this study

Study population?
Study design?
Retrospective versus prospective,
RCT versus observational
Measurement limitations?
Subjective or objective

Writing the Discussion

6. Conclusion

Copy and paste the 1st paragraph of discussion
Paraphrase the paragraph
Does it have a concise and consistent message?

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The NEW ENGLAND JOURNAL of MEDICINE

ESTABLISHED IN 1812 FEBRUARY 17, 2005 VOL. 352 NO. 7

The Risk of Cesarean Delivery with Neuraxial Analgesia Given Early versus Late in Labor

Cynthia A. Wong, M.D., Barbara M. Scavone, M.D., Alan M. Peaceman, M.D., Robert J. McCarthy, Pharm.D., John T. Sullivan, M.D., Nathaniel T. Diaz, M.D., Edward Yaghmour, M.D., R-Jay L. Marcus, M.D., Saadia S. Sherwani, M.D., Michelle T. Sproviero, M.D., Meltem Yilmaz, M.D., Roshani Patel, R.N., Carmen Robles, R.N., and Sharon Grouper, B.S.

Impact of the timing of epidural analgesia on outcome of delivery

Epidural analgesia shortened the duration of labour

BACKGROUND

Epidural analgesia initiated early in labor (when the cervix is less than 4.0 cm dilated) has been associated with an increased risk of cesarean delivery. It is unclear, however, whether this increase in risk is due to the analgesia or is attributable to other factors.

METHODS

We conducted a randomized trial of 750 nulliparous women at term who were in spontaneous labor or had spontaneous rupture of the membranes and who had a cervical dilatation of less than 4.0 cm. Women were randomly assigned to receive intrathecal fentanyl or systemic hydromorphone at the first request for analgesia. Epidural analgesia was initiated in the intrathecal group at the second request for analgesia and in the systemic group at a cervical dilatation of 4.0 cm or greater or at the third request for analgesia. The primary outcome was the rate of cesarean delivery.

RESULTS

The rate of cesarean delivery was not significantly different between the groups (17.8 percent after intrathecal analgesia vs. 20.7 percent after systemic analgesia; 95 percent confidence interval for the difference, −0.0 to 3.0 percentage points; P=0.31). The median time from the initiation of analgesia to complete dilatation was significantly shorter after intrathecal analgesia than after systemic analgesia (295 minutes vs. 385 minutes, P<0.001), as was the time to vaginal delivery (398 minutes vs. 479 minutes, P<0.001). Pain scores after the first intervention were significantly lower after intrathecal analgesia than after systemic analgesia (2 vs. 6 on a 0-to-10 scale, P<0.001). The incidence of one-minute Apgar scores below 7 was significantly higher after systemic analgesia (24.0 percent vs. 16.7 percent, P=0.01).

CONCLUSIONS

Neuraxial analgesia in early labor did not increase the rate of cesarean delivery, and it provided better analgesia and resulted in a shorter duration of labor than systemic analgesia.

Writing the Discussion

1. Compact the conclusion

Summarise the most important finding
Conclusion of the primary outcome

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cent confidence interval, 1.01 to 1.08), weight (relative risk for each 1-kg increase, 1.02; 95 percent confidence interval, 1.01 to 1.03), and maximal oxytocin-infusion rate (relative risk for each increase by 1 mU per minute, 1.05; 95 percent confidence interval, 1.02 to 1.07). The method of providing analgesia was not a significant independent predictor of cesarean delivery.

DISCUSSION

In this randomized trial, intrathecal opioid analgesia, as compared with systemic opioid analgesia, in early labor did not increase the rate of cesarean delivery. These results extend those reported by Chestnut et al., who found no difference in the cesarean-delivery rate between nulliparous women randomly assigned to early epidural analgesia (at a cervical dilatation of greater than 3.0 cm but less than 5.0 cm) or late epidural analgesia (at a cervical dilatation of 5.0 cm or greater after systemic opioid administration).[7,8] In these studies, the median cervical dilatation in the early groups was 3.5 and 4.0 cm, as compared with 2.0 cm in the current study. Similarly, in a study of 60 nulliparous women, no difference in the cesarean-delivery rate was found be-

Wong et al, NEJM Feb 17, 2005

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Writing the Discussion

2. Comparison to and consistency with other studies

Our study show that there are differences… possible reasons for the differences are…

Our study is consistent with studies X,Y,Z in the findings of…

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Differences

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Wong et al, NEJM Feb 17, 2005

Writing the Discussion

3. Plausible explanations

Scientific pathway in explanation
Basic science linkage or relationship

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A clinically important finding of the current study is that the duration of the first stage of labor was approximately 90 minutes shorter after intrathecal opioid administration than after systemic opioid administration. Previous studies have found that epidural, as compared with systemic opioid, analgesia is associated with a prolonged first stage of labor.[2,14] Factors that influence the progress of labor are not well understood. Autonomic imbalance has been proposed as an explanation of the association between epidural analgesia and pro-

Scientific pathway in explanation

longed labor.[15] Tocodynamic parasympathetic efferent nerves are blocked by neuraxial local anesthetics, but presumably not by neuraxial opioids. This difference may explain why cervical dilation was faster in women who were randomly assigned to combined spinal–epidural analgesia as compared with those assigned to epidural analgesia.[16] Furthermore, the presence or degree of autonomic imbalance may be influenced by the type of epidural analgesia (for example, the concentration of local anesthetics). In the current study, epidural analgesia was not identical among all the subjects, and this discrepancy may have been a factor in the observed difference in the progress of labor.

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Writing the Discussion

4. Implications

Clinical implications
Research implications

What is the next step for future research?

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Research implications

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Wong et al, NEJM Feb 17, 2005

Writing the Discussion

5. Limitations and caveats to this study

Study population?
Study design?
Retrospective versus prospective,
RCT versus observational
Measurement limitations?
Subjective or objective

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limitations

There are several limitations to our study. The study was not powered to detect a small difference between the groups in the rate of cesarean delivery. However, the 95 percent confidence interval for the difference between the groups suggests that plausible differences between the groups would not exceed 9 percentage points if the rate in the intrathecal group were lower or 3 percentage points if the rate in the intrathecal group were higher. We studied nulliparous women in spontaneous labor or with spontaneous rupture of the membranes, and our results may not apply to other populations. In addition, the faster progress of labor after intrathecal analgesia, as compared with systemic analgesia, may have been influenced by the greater cervical dilatation at the initiation of analgesia. Multivariate modeling, however, indicated that the type of analgesia was an independent predictor of the progress of labor.

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Wong et al, NEJM Feb 17, 2005

Four Years Later…

Early Compared With Late Neuraxial Analgesia in Nulliparous Labor Induction

A Randomized Controlled Trial

Cynthia A. Wong, MD, Robert J. McCarthy, PharmD, John T. Sullivan, MD, Barbara M. Scavone, MD, Susan E. Gerber, MD, MPH, and Edward A. Yaghmour, MD

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Writing the Discussion

6. Conclusion

Copy and paste the 1st paragraph of discussion
Paraphrase the paragraph
Does it have a concise and consistent message?

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In summary, the results of this randomized trial suggest that nulliparous women in spontaneous labor or with spontaneous rupture of membranes who request pain relief early in labor can receive neuraxial analgesia at that time without adverse consequences. When compared with systemic opioid analgesia, initiation of early neuraxial analgesia does not increase the risk of cesarean delivery and may shorten labor.

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Writing the Discussion

What do you conclude from your observations?

Summarize the most important findings
What conclusions can you draw?
What patterns, principles, relationships do the results show?
How do results relate to expectations and to literature cited in Introduction (agreement, contradiction, exceptions)?
Do you have a plausible explanation (s)?
What additional research might resolve contradictions, explain exceptions?

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Writing the Discussion

How do the results fit into a broader context?

What theoretical implications do the results have?
What practical applications might the results have?
Can you extend your findings to other situations?
Do they help us understand a broader topic?

Don't ignore controversies

Try to explain unexpected findings

Avoid speculation or unreasonable extrapolation of your results

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So Did We Tell A Good Story?

4 Key Sentences
(Storyboarding)

Take the first and last sentences of the Introduction

Take the first and last sentences of the Discussion

Do you have a clear narrative?

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First sentence in Introduction

THE AMERICAN COLLEGE OF OBSTETRIcians and Gynecologists recommends that "when feasible, obstetrical practitioners should delay the administration of epidural anesthesia in nulliparous women until the cervical dilatation reaches at least 4.0 to 5.0 cm and that other forms of analgesia should be used until that time."[1] This recommendation is based on studies that found an association between the initiation of epidural analgesia early in labor and an increased rate of cesarean delivery.[2,3] The nature of this association is uncertain. Neuraxial analgesia may directly or indirectly influence the progress of labor. Alternatively, the request for analgesia early in labor may be a marker for some other risk factor for cesarean delivery, such as dysfunctional labor.

We hypothesized that initiating and maintaining neuraxial analgesia early in labor with intrathecal opioid as part of a low-dose local anesthetic technique would not increase the risk of cesarean delivery when compared with systemic opioid analgesia. We designed this trial to compare the rate of cesarean delivery in nulliparous women in spontaneous labor or with spontaneous rupture of the membranes who requested analgesia early in labor and were randomly assigned to receive intrathecal or systemic opioid analgesia.

Last sentence in Introduction

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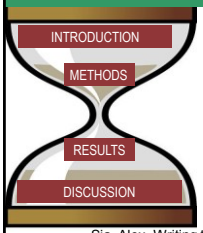
DISCUSSION

In this randomized trial, intrathecal opioid analgesia, as compared with systemic opioid analgesia, in early labor did not increase the risk of cesarean delivery

Consistent and clear

In summary, the results of this randomized trial suggest that nulliparous women in spontaneous labor or with spontaneous rupture of membranes who request pain relief early in labor can receive neuraxial analgesia at that time without adverse consequences. When compared with systemic opioid analgesia, initiation of early neuraxial analgesia does not increase the risk of cesarean delivery and may shorten labor.

Writing the Discussion



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Writing the Discussion

Perspective: Putting it together

INTRODUCTION: Tell them what you are going to say

- Introduction (Why did we study?)

BODY: Say it

- Methods (Who, What, When, Where and How did we study?)
- Results (What did we find?) And
- Discussion (What do the findings mean?) AND

CONCLUSION: Tell them what you said

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