

NEUROIMMUNOLOGY TELEMEDICINE IN MANADO: WHERE ARE WE NOW?



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INTRODUCTION

Indonesian Neuroimmunology Teleconference → a telemedicine activity held between Kyushu University Japan and various Neurology Centers in Indonesia

**Until August
2018**



- 14 teleconferences meeting have been held
- 7 Indonesian neurology centers + Kyushu University
- 32 cases have been discussed



HISTORY

Early Feb 2017

- Offering from dr Riwanti E, FMUI
- Agreement to start teleconf
- Connection test succeeded

Feb 07, 2017

- 1-st teleconf
- Vidyo Software
- 5 sites
- 2 cases

Mar 27, 2017

- 6-th
- Vidyo Software
- 7 sites
- 3 cases

Oct 5, 2017

- 1st Temdec meeting involving out site

Oct 30, 2017

- 7-th teleconf
- Vidyo Software
- 8 sites
- 4 cases

July 27, 2018

- 14-th teleconf
- Vidyo Software
- 8 sites
- 2 cases

Agt 30, 2018

- 2nd Temdec meeting involving out site

Next?



CURRENT SITUATION IN MANADO SITE

- Connection speed : 10 Mbps, using Indiehome
- Neurologist attendance : 1-3 person(s)/meeting
- Resident attendance : 18-32 persons/meeting
- Event attended : 14 teleconferences
- Case presented : 4 cases
- Temdec meeting : 2 meetings
- Designated room : No (standard lecture room only)
- Designated AV equipment : No (standard speaker + laptop + laptop mounted camera only)



*"Where Had This Activities Brought Us
Into?"*



- We surveyed participants of the event from Manado site
- Samples for questionnaires and semi-structured interview (SSI): teleconference participants from Manado site:
 - Audience
 - Case presenter
 - Technician
- Methods:
 - Semi-structured questionnaires covering technical issues, benefits, and other issues
 - SSI using issues found in the interview
 - Analysis of archive of the teleconferences
- Questionnaires: obtained after the last teleconference
- SSI: conducted on Aug 25, 2018

We compared the result to the previous survey



What is The Statistics?

- Total case presented: 4 of 32
- Number of teleconference followed: 13 of 13
- Average duration per session: 2.5 hours



Questionnaires & Interviews

- 41 participants
- 37 (90,2%) aged 25-35 years old
- 21 (51,2%) have participated in 7 or more teleconferences



The Benefits:

	2017	2018
Improving knowledge	100%	92.7%
Teleconference meeting at least once per month	77.8%	100%
At least 3 days to study the topic before the meeting started	66.2%	90.2%


Residents acknowledged their **NEED** to had teleconference meeting at least once per month,

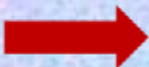
but the discussions were, sometimes, **TOO COMPLICATED** and bringing more “questions” rather than “answers”



The Flaws: “Sometimes the audio was not clear, especially from Japan”

Questionnaires:

	2017	2018
Poor sound or video quality	86.7%	 100%
Lack of discussion	10%	0%
Slow internet speed	3.3%	0%

 Was this also experienced by other sites or only in Manado?

SSI:

Primary issue: Poor AV

“Sometimes the audio was not clear, especially from Japan

(AK, participant, third year resident”)



The Presenters

Questionnaires: (4 presenters)

	2017	2018
Language barrier	Minor problem	Minor problem
Nervousness	Major problem	Minor problem

SSI:

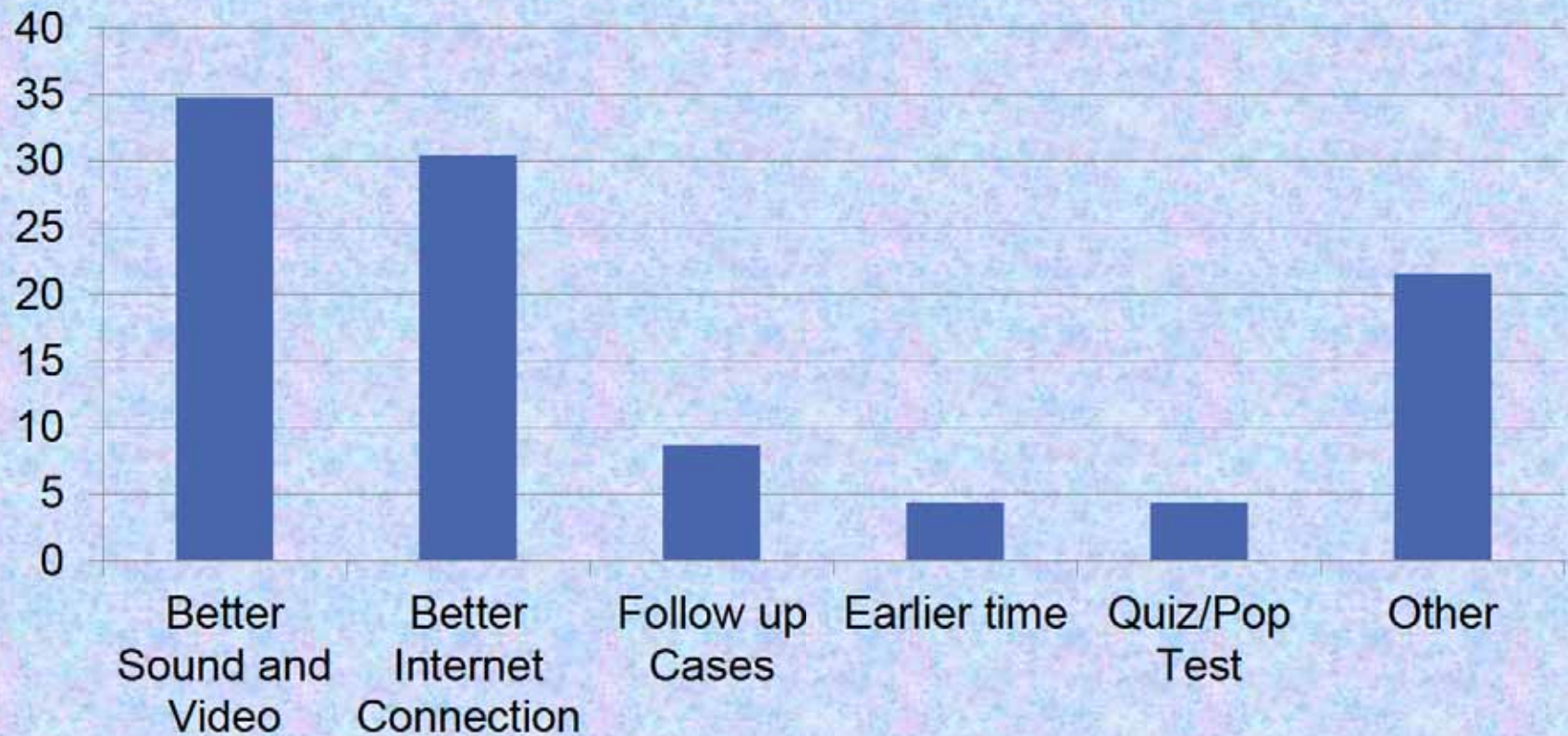
- Primary issue: Nervousness

“I was nervous.”

(Y, participant, first year resident)



To Make It Better



Earlier time defined as before 11.00 am Wita/GMT +8



"So, what is next?"



ANALYSIS OF CHANGE

Does this activity changed the everyday practice?

We intend to conduct the following study:

**THE IMPACT OF INDONESIA NEUROIMMUNOLOGY
TELECONFERENCE TO THE KNOWLEDGE AND
PRACTICE OF PARTICIPATING NEUROLOGY RESIDENTS
IN MANADO, NORTH SULAWESI, INDONESIA**



- *Purpose:* We intend to study the **knowledge** of participating residents in Manado about neuroimmunology and **how this activity benefited their practice**.

- *Methods:*

Mixed: Written test (before-after) + Questionnaire + SSI + registry tracing.

Definition of **knowledge indicator: an increased of neuroimmunology examination score** after the latest teleconference (post-test) compared to before teleconference (pre-test).

Will be studied in residents participated for $\geq 80\%$ of the teleconference.

Definition of **practice indicators:**

1. **The incorporation of proper ancillary examinations in suspected neuroimmunology cases**
2. **Immunotherapy application in Guillain-Barre syndrome (GBS).**

Will be studied by:

1. **Tracing** neuroinfection-neuroimmunology registry in a period of 6 months.
 2. Performing a **semi-structured interview** (SSI) to the residents about the **reasons** for advising immunotherapy.
- *Subject:* Participating neurology residents
 - *Duration of study:* 6 months

Please give suggestions



CONCLUSION

Telemedicine:

- Plays an important role in improving knowledge of medical doctor in our site
- Has been routinely done with increasing participants
- Has published 1 report in an international conference

However:

- The attendance of the specialists is low
- Audio should be improved → technician's presentation
- The impact of this activity to clinical practice has not been studied yet



Thank you!

Disclosure:

The presenter received air transport fee and accommodation from the committee for presenting this report

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