Supplementary Material 2 for

Research Article

The neuro-inflammasome in Alzheimer's disease and cerebral stroke

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Materials and Methods:

S1: The Patient's Medical Records from Cham Woori Rehabilitation & Care Hospital

This study is based on the results of the Seoul cohort. The patient's medical records were issued legally according to Korean medical law. All medical records in this supplement are copies of the patient's original medical charts. (English translations were added to some parts of the record written in Korean when needed.)

{On 12 September 2020, Medical Referral Form} (Supplement 2-1 [data], pages 1-2)
Pt. is hospitalized (2020.5.10) for Rt hemiplegia a/w Lt PCA-MCA border zone infarction. Pt. is transferred for the following reasons:
#1. Pt. maintained Hb 6.9-8.3 but decreased to 6.7 on 9/3 and 5.9 on 9/12.
2. Shows poor saturation (~80%) due to pneumonia.
Most current CBC results (usually showed Hb 7): No occult blood in stool exam on 9/3. No haematuria at U/A. No melena or gross HU (haematuria). Suspected anaemia of chronic disease

On September 11, pneumonia was diagnosed based on CXR and an increased WBC count; therefore, tazobaxin + levofloxacin was started. The patient had a BT of 36.6°C and no exacerbation of sputum production but showed poor SpO_2 (in the 80s). SpO_2 increased to 95% when a mask with a reservoir (O_2 flow 10 L) was used (Pt. had been using a facial mask with O_2 flow 5 L since admission).
Intermittent mild UTI (urinary tract infection) responsive to ciprofloxacin. On September 3, the patient showed Rt hand and forearm oedema; therefore, celecoxib was started. The oedema then decreased, and celecoxib was withdrawn.
Mental status showed no change from admission (5/25) until the day of examination (9/12). Pt. was drowsy but socially smiled at medical staff.

Guardian provided dapsone and gave a maintenance dose of 100 mg tid.

Transferring for blood transfusion and pneumonia management.

{Radiologic examination} (Supplement 2-1 [data], pages 3-5)

2020-05-25 Chest PA – Finding: BLL haziness (Rt>Lt)

Abdomen Supine: abd faecal material, possible multiple rib fx

2020-09-03 Chest AP – Finding: The picture was generally clear, but it was difficult to find a specific focus of infiltration.

2020-09-11 Chest AP – Finding: haziness of the whole Lt lung

S2: The Patient's Medical Records from Inje University Seoul Paik Hospital

This study is based on the results of the Seoul cohort. The patient's medical records were issued legally according to Korean medical law. All medical records in this supplement are copies of the patient's original medical charts. (English translations were added to some parts of the record written in Korean when needed.)

{Consciousness level according to the patient's medical record} (Supplement 2-2 [data], pages 2-11)

2020-09-13 (14:00) Mental check: Stupor (page 3)

2020-09-15 (15:30) Mental check: Stupor (page 4)

2020-09-16 (10:06) Mental change: None (page 5)

2020-09-16 (18:53) Mental check: Drowsy – nodding head, can express intention (page 6)

2020-09-17 (11:00) Mental check: Confused state (page 7)

2020-09-17 (18:54) Mental check: Drowsy – nodding head, can express intention (page 8)

2020-09-18 (01:16) Mental check: Drowsy (page 9)

2020-09-18 (04:45) Mental change: None (page 9)

2020-09-18 (10:12) Mental check: Drowsy (page 9)

2020-09-18 (18:35) Mental check: Drowsy – nodding head, can express intention (page 10)

2020-09-28 (06:52) Mental check: Drowsy (page 11)

2020-09-28 (10:35) Mental check: Drowsy (page 11)

{Radiologic examination} (Supplement 2-2 [data], pages 12-22)

2020-09-12 HR CT of Chest (12 page)

1.a) Multifocal peribronchial patchy consolidation and GGO (ground-glass opacity) in LUL, suggesting pneumonia
including aspiration pneumonia
b) BLL consolidation, r/o pneumonia
c) Multifocal endobronchial secretion in the left main bronchus and left lower lung segmental bronchus.
2. No definite evidence of PTE (pulmonary thromboembolism)
3. Large amount of bilateral pleural effusion
4. Underlying tuberculosis sequelae in bilateral upper lungs
5. Pericardial effusion
6. R/O reactive mediastinal lymph nodes
7. Aneurysmal dilatation of the pulmonary trunk (5.1 cm)
R/O pulmonary hypertension
8. Multifocal AS (atherosclerosis) changes with calcification in the aorta and coronary arteries
Impression:
C. I > r/o pneumonia
Some limitations due to motion artifacts and suboptimal pulmonary artery enhancement.
l.a) Multifocal peribronchial patchy consolidation and GGO in LUL, suggesting pneumonia
including aspiration pneumonia
b) BLL consolidation, r/o pneumonia.
c) Multifocal endobronchial secretion in the left main bronchus and LLL segmental bronchus
2. No definite evidence of PTE
3. Large amount of bilateral pleural effusion

2020-09-12 Chest AP (page 13)
haziness in whole left lung
right pleural effusion
Impression:
haziness in whole left lung
right pleural effusion

2020-09-13 Chest AP (page 14)

improving haziness in the left lung

multifocal consolidation in the left lung, rule out pneumonia

bilateral pleural effusion -> decreasing

cardiomegaly

Impression:

improving haziness in the left lung

multifocal consolidation in the left lung, r/o pneumonia

bilateral pleural effusion -> decreasing

cardiomegaly

2020-09-14 Chest AP (page 15)

improving haziness in the left lung

multifocal consolidation in the left lung, rule out pneumonia

bilateral pleural effusion -> decreasing

cardiomegaly

Impression:

improving haziness in the left lung

multifocal consolidation in the left lung, r/o pneumonia

bilateral pleural effusion -> decreasing

cardiomegaly

2020-09-15 Chest AP (page 16)

decreased left pleural effusion and improved haziness in the left lung

otherwise, no change.

lmpression:

decreased left pleural effusion and improved haziness in the left lung

otherwise, no change

2020-09-16 Chest AP (page 17)

No definite evidence of radiographic interval changes since last chest radiograph

No evidence of newly developed other abnormal findings at this time

Impression

No definite interval changes

2020-09-17 Chest AP (page 18)

bilateral pleural effusion (Lt. > Rt.)

Lt. pigtail tube insertion state

2020-09-17 Chest AP (page 19)

Lt. pigtail tube insertion state

decreased Lt. pleural effusion

no significant interval change in Rt. pleural effusion.

2020-09-18 Chest AP (page 20)

no significant interval change in bilateral pleural effusion or pulmonary oedema

2020-09-21 Chest AP (page 21)

increased Rt. pleural effusion

no significant interval change 01 Lt. pleural effusion

2020-09-22 Chest AP (page 22)

decreased bilateral pleural effusion

{Echocardiography examination} (Supplement 2-2 [data], pages 23-24)

2020-09-18

Interpretation (page 23)

**lnfective endocarditis, severe MR (mitral regurgitation)

l. LV (left ventricle)

1) normal LV cavity size and normal LV systolic function

2) normal LV wall thickness

3) no regional wall motion abnormality

4) Indeterminate diastolic function d/t AF (atrial fibrillation)

2. RV (right ventricle)

1) normal RV cavity size and normal RV systolic function

2) normal RV wall thickness

3. valve: trivial TR (tricuspid regurgitation)

AV (aortic valve))

MV (mitral valve)): moderate to severe MR

- PISA (proximal isovelocity surface area) radius: 0.72 cm, MR ERO (effective regurgitant orifice): 0.25 cm^2,

MR RV (regurgitant volume): 27.2 ml

Enlarged LA (left atrium)

5. no pericardial effusion

6. a vegetation at the MV (1.18*1.40 cm) invading the paravalvular apparatus

7. no pulmonary hypertension: RVSP (right ventricular systolic pressure) (by TR Vmax)=38.6 mmHg,

assumed RAP (right atrial pressure) =5 mmHg

Conclusion (page 24)

Normal-sized LV with normal LV systolic function

Indeterminate diastolic function d/t AF

No RWMA (regional wall motion abnormality)

Moderate to severe MR

A vegetation at the MV (1.18*1.40 cm)

imp) improved RVSP (62.5-->38.6 mmHg) compared to the previous echo (2020.9.14)

Infective endocarditis with paravalvular invasion

rec) consider surgical treatment for IE (infective endocarditis) if clinically appropriate

{Agreement} (Supplement 2-2 [data], page 25)

<Agreement>

** I have been told the patient's condition and have been told about the circumstances in which antibiotics should be used due to infectious endocarditis and infectious pleural effusion.

The patient's second son urged the medical staff to use dapsone to prevent deterioration of brain condition.

As dapsone has a side effect of reduced white blood cell counts, we were told that it might adversely affect the treatment, possibly worsening the patient's condition and posing a future risk of death.

Therefore, we will not hold the hospitals or medical staff responsible for deterioration or death following the use of dapsone.

I agree with this.