



Dr Kannan ,Kaliyaperumal
Specialist Orthopaedic Centre
38 Irrawaddy Road
#09-33
Mount Elizabeth Novena Specialist
Centre
Singapore 329563
cc: Kannan ,Kaliyaperumal

Patient: **Phua, Qing Hong Byran**
Date Admitted: 08/02/2021
Request ID: 22210674
Enc. Comments: N/A
MRN: 6264173
Accession No: n/a
Ward/Location: WARD10-N

ID: S9613536Z
Gender: Male
DOB: 12/04/1996
Clinical
Ref:

BIOCHEMISTRY

RENAL (KIDNEY) PROFILE

Collection Date: 08/02/2021
Collection Time: 16:36

	RESULT	REFERENCE	UNITS
Sodium	钠 138	[135-150]	mmol/L
Potassium	钾 4.4	[3.3-5.0]	mmol/L
Chloride	氯 103	[96-108]	mmol/L
Bicarbonate	碳酸氢盐 26	[21-32]	mmol/L
Urea	尿素 3.5	[2.8-7.7]	mmol/L
Creatinine	肌酐 63	[53-115]	umol/L
eGFR	131 ^{il}	[>=60]	

Interpretive Data

il: eGFR
Expected Range: >= 60 mL/min/1.73 square metres
eGFR is calculated based on CKD-EPI formula.

LIVER PROFILE

Collection Date: 08/02/2021
Collection Time: 16:36

	RESULT	REFERENCE	UNITS
Bilirubin Total	总胆红素 25	[0-26]	umol/L
Total Protein	总蛋白 72	[62-82]	g/L
Albumin	白蛋白 45	[37-51]	g/L
Globulin	球蛋白 27	[19-39]	g/L
Alb/Glo Ratio	白蛋白 / 球蛋白比率 1.7	[1.2-2.5]	
Alk Phos	碱性磷酸酶 134 ^H	[35-120]	U/L
AST /SGOT	天门冬氨酸氨基转移酶 43 ^H	[0-40]	U/L
ALT /SGPT	丙氨酸氨基转移酶 107 ^H	[3-40]	U/L
GGT	γ-谷氨酰转肽酶 96 ^H	[0-50]	U/L

ENDOCRINE (GLAND) FUNCTION

Collection Date: 08/02/2021
Collection Time: 16:36

	RESULT	REFERENCE	UNITS
Glucose	血糖 4.8	[3.6-6.0]	mmol/L

Legend: C - Critical a - Corrected f - footnotes

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BIOCHEMISTRY

ENDOCRINE (GLAND) FUNCTION

BONE/JOINT PROFILE

Collection Date: 08/02/2021
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	RESULT	REFERENCE	UNITS
Uric Acid 尿酸	378	[212-453]	umol/L

SEROLOGY

SEROLOGY

Collection Date: 08/02/2021
Collection Time: 16:36

	RESULT	REFERENCE	UNITS
C-Reactive Prot C-反应蛋白	62.50 ^{H i2}	[<=9.99]	mg/L

Interpretive Data

i2: C-Reactive Prot
With effect from 24 January 2020, please be informed that there is a change in the reference interval (R.I.) for CRP from 0.00 - 10.00 mg/L to <= 9.99 mg/L.

CLINICAL MOLECULAR

CLINICAL MOLECULAR

Collection Date: 08/02/2021
Collection Time: 20:10

	RESULT	REFERENCE	UNITS
MRSA PCR,XPERT	Not Detected _{i3}		
VRE PCR,XPERT vanA DNA	Not Detected _{i4}		
VRE PCR,XPERT vanB DNA	Not Detected _{i3}		
CP-CRO PCR,XPERT KPC DNA	Not Detected		
CP-CRO PCR,XPERT NDM DNA	Not Detected		
CP-CRO PCR,XPERT VIM DNA	Not Detected		
CP-CRO PCR,XPERT OXA-48 DNA	Not Detected		

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CLINICAL MOLECULAR

CLINICAL MOLECULAR

CP-CRO PCR,XPERT **Not Detected**
IMP1 DNA

Interpretive Data

i3: MRSA PCR, XPert, VRE PCR, XPert vanB DNA
Method: Qualitative Real-time PCR using GeneXpert

i4: VRE PCR, XPert vanA DNA
Vancomycin-resistant Enterococci (VRE) are specific types of antimicrobial-resistant bacteria that are resistant to vancomycin. There are six different types of vancomycin resistance are shown by enterococcus: Van-A, Van-B, Van-C, Van-D, Van-E and Van-G. The significance is that Van-A VRE is resistant to both vancomycin and teicoplanin, Van-B VRE is resistant to vancomycin but susceptible to teicoplanin, and Van-C is only partly resistant to vancomycin. Van-A and Van-B are the most clinically relevant.

i5: CP-CRO PCR, XPert IMP1 DNA
Carbapenemase Producing Carbapenem - Resistant Organism (CP-CRO), are a family of germs that are difficult to treat because they have high levels of resistance to antibiotics. They are resistant because they produce an enzyme called a carbapenemase that disables the drug molecule. Klebsiella species and Escherichia coli (E. coli) are examples of Enterobacteriaceae, a normal part of the human gut bacteria, that can become carbapenem-resistant. The major enzymes/mode of resistance are KPC, NDM, VIM, OXA-48, IMP1.
1. KPC : Klebsiella pneumoniae carbapenemase is a class A B-lactamase which has the capacity to hydrolyze penicillins, cephalosporins, and carbapenems.
2. NDM : New Delhi Metallo-beta-lactamase is a class B B-lactamase and is capable of hydrolyzing penicillins, cephalosporins, and carbapenems, but unlike KPC, it does not hydrolyze aztreonam.

3. VIM : Verona Integron-Mediated Metallo-B-lactamase
4. OXA-48 : OXA stands for oxacillinase and is a diverse group of B-lactamases classified to class D. Some of OXA B-lactamases additionally have the capability to hydrolyze carbapenems. In Enterobacteriaceae, OXA-48 and its related enzymes are the ones that require attention.
5. IMP1 : Imipenemase Metallo-B-lactamase is a class B metallo-B-lactamases (MBLs).

Please note: The presence of Enterobacteriaceae can be confirmed by Culture. Please use Culture & Sensitivity (test code C CRE) to confirm CP-CRE in CP-CRO detected cases.

Method: Qualitative Real-time PCR using GeneXpert

HAEMATOLOGY

BLOOD COUNT

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HAEMATOLOGY

BLOOD COUNT

	RESULT	REFERENCE	UNITS
Red Blood Cells (RBC)	4.90	[4.01-5.36]	mil/uL
Haemoglobin (HGB)	15.4	[13.0-16.9]	g/dL
Haematocrit	44.3	[35.6-50.6]	%
Mean Cell Volume	90.4	[79.1-97.4]	fL
Mean Cell HGB (MCH)	31.4	[25.5-33.1]	pg
MCH Concentration	34.7	[30.9-34.8]	g/dL
RBC Distribution Width	12.2	[12.2-15.4]	%
Mean Platelet Volume	7.8	[6.8-10.4]	fL
Platelets	261	[140-460]	ths/uL
White Blood Cells	11.48^H	[4.20-11.00]	ths/uL

DIFFERENTIAL

Collection Date: 08/02/2021
Collection Time: 16:36

	RESULT	REFERENCE	UNITS
Neutrophils 中性粒细胞	81.7^H	[42.5-74.0]	%
Neutrophils #	9.38^H	[1.90-7.20]	ths/uL
Lymphocytes 淋巴细胞	11.0^L	[21.1-43.2]	%
Lymphocytes #	1.26	[1.20-3.40]	ths/uL
Monocytes 单核细胞	6.1	[4.0-10.0]	%
Monocytes #	0.70	[0.20-0.70]	ths/uL
Eosinophils 嗜酸性粒细胞	0.6	[0.0-5.6]	%
Eosinophils #	0.07	[0.04-0.56]	ths/uL
Basophils 嗜碱性粒细胞	0.5	[0.0-1.0]	%
Basophils #	0.06	[0.00-0.09]	ths/uL

SPECIAL HAEMATOLOGY

SPECIAL HAEMATOLOGY

Collection Date: 08/02/2021
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	RESULT	REFERENCE	UNITS
ESR Auto 红细胞沉降率	49^H	[0-14]	mm/hr

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