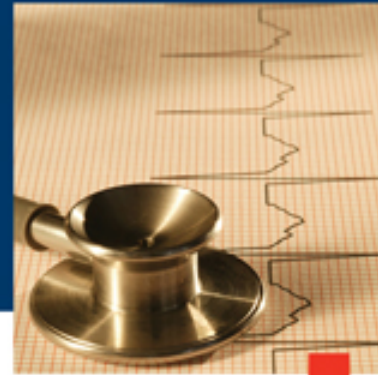
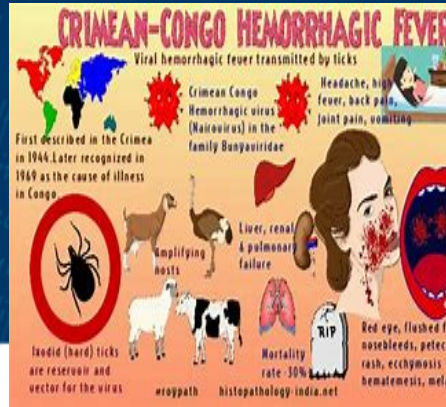


Life is an opportunity, benefit from it. Life is beautiful, enjoy it.
Life is bliss, taste it. Life is a dream, realize it.
Life is a challenge, meet it. Life is a duty, complete it.
Life is a game, play it. Life is costly, care for it.
Life is wealth, keep it. Life is love, enjoy it.
Life is mystery, know it. Life is a promise, fulfill it.
Life is sorrow, overcome it. Life is a song, sing it.
Life is a struggle, accept it. Life is tragedy, overcome it.
Life is an adventure, dare it. Life is luck, make the most of it.
Life is too precious, do not destroy it. Life is a gift, cherish it.



Is It Crimean Congo Hemorrhagic Fever ?

Patient Case study

Presented: Renè de Beer Life Anncron Hospital

What is VHF



- Viral Hemorrhagic Fever
- In general, the term "viral hemorrhagic fever" is used to describe a severe multisystem syndrome (multiple organ systems in the body are affected).
- Characteristically, the overall vascular system is damaged, and the body's ability to regulate itself is impaired.
- These symptoms are often accompanied by hemorrhage (bleeding), fever, Petechiae, maculopapular rashes, organ failure

Crimean- Congo Hemorrhagic fever (CCHF).



- Crimean-Congo hemorrhagic fever (CCHF) is caused by infection with a tick-borne virus (Nairovirus) in the family Bunyaviridae.
- The virus is primarily transmitted to people from ticks and livestock animals. Human-to-human transmission can occur resulting from close contact with the blood, secretions, organs or other bodily fluids of infected persons .

- **Symptoms:**

- flu -like symptoms, headache, fever, Nausea, vomiting, petechiae.
- Bleed from any organ: vomiting of blood, bleeding from the nose or gums, or bruising of skin
- Clotting mechanisms alteration, a decrease in the platelets
- Liver, kidney and lung failure
- Between five to 14 days after initial presentation, death can occur as a result of multi-organ failure and hemorrhage.



Blood tests done



- COVID and Influenza negative

Toetse Aangevra :
BLOEDTELLING & PLT, BRUCELLA IGM/IGG, R.CONORII IF IGM/IGG

Monster Tipes : Blood
Primere ICD10 Kode(s) : Z76.9

----- HEMATOLOGIE -----

Toets	Resultaat	Wysers	Verwysing
ROOISELLE			
> Rooiseltelling	5.78	4.5 - 5.9	x10E12/L
> Hemoglobien	18.0	13.0 - 18.0	g/dL
> Hematokrit	0.52	H 0.40 - 0.50	L/L
> GKV	90	81 - 100	fL
> GKH	31	28 - 35	pg
> GKHK	35	32 - 36	g/dL
> RDW	12.4	10 - 15	%
WITSELLE			
> Witseltelling	8.1	4.0 - 11.0	x10E9/L
> Neutrofiel	86.5%	7.02	2.00 - 7.50 x10E9/L
> Limfosiete	7.1%	L 0.58	1.00 - 4.00 x10E9/L
> Monosiete	6.2%	0.50	0.00 - 0.95 x10E9/L
> Basofiele	0.2%	0.02	0.00 - 0.10 x10E9/L
PLAATJIES			
> Plaatjietelling	135	L 140 - 420	x10E9/L

Abnormale resultate is nagegaan.

Low platelets

Increased Liver enzymes

Toets	Resultaat	Wysers	Verwysing
> B-GLUKOSE LUFRAAK ##	6.7	H	3.9-5.5 mmol/L
<small>< 5.6 mmol/L - D.M. onwaarskynlik 5.6 - 11.0 mmol/L - herhaal vastend > 11.0 mmol/L - oorweeg D.M.</small>			
LEWERFUNKSIES			
> S-TOTALE PROTIEENE	58	L	64-83 g/L
> S-ALBUMIN	38		35-52 g/L
> S-GLOBULIEN	20	L	21-35 g/L
> S-TOTALE BILIRUBIEN	23	H	< 21 umol/L
> S-GERONS. BILIRUBIEN	17	H	< 9 umol/L
> ONGERONS. BILIRUBIEN	6		< 19 umol/L
> S-ALK. FOSFATASE	269	*H	53-128 IU/L
> S-GAMMA GT	338	*H	< 60 IU/L
> S-ALT	299	*H	< 41 IU/L
> S-AST	207	*H	< 41 IU/L
YSTER PROFIEL			
> S-YSTER ##	3.3	*L	12 - 31 umol/L
<small>Let wel: IV yster toediening mag in net die metode en toetsing soet uitgestel word tot ten minste 3 weke na behandeling.</small>			
> S-TRANSFERRIEN	2.07		1.74 - 3.64 g/L
> % VERSADIGING	6	*L	20-55 %
> FERRITIEN (ASOTT)	1717	*H	ug/L
<small>Oprens vir ferritien is 375 ug/L. Oorsaak vir verhoogde ferritien sluit in: Akute en chroniese inflammasoriese toestande Lewerziekte Oormatige ysterterapie Maligniteit Ysteroorlading: Hemochromatose, herhaalde bloedtransfusies</small>			
> C-REAKTIEWE PROTEINE	118.5	H	0-5.0 mg/L
VERWYSINGSWAARDES KOMMENTAAR			

Increased CRP

Admission in ICU

24/11/2022

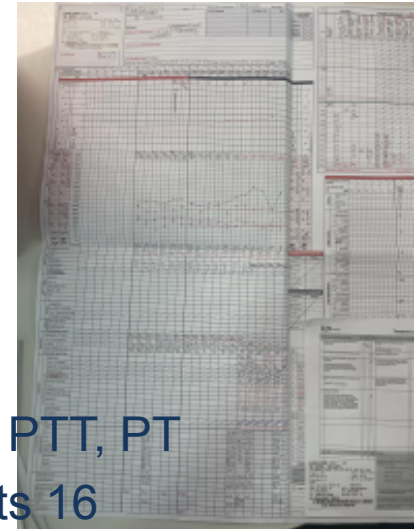


■ Condition:

- Severe coagulopathy, with macroscopic haematuria, purpuric skin lesions and hematomas, a low platelet count, and prolonged prothrombin and partial-thromboplastin times.
- Temp 38.2°C
- BP 128/66mmHg, Pulse 82

Treatment plan:

- Meropenem 2g 8 Hourly
- Teicoplanin 400mg BD
- Blood tests done: VBT, UK&E, LFT, CRP, PLT, CMP, INR, PTT, PT
- CRP 235, pro-BNP 647, D-Dimer 9,57, PCT 4,73, Platelets 16



Dr requested testing for Crimm Congo fever @19:00

Nursing response



- IPS was contacted and outbreak protocol initiated.
- FED isolation to be implemented.

Real time problems:

- Hospital- 90% occupancy
- Identified isolation area unavailable
- Currently occupying only ICU available
- Other patients in unit



Making life better
better Making life
life better Making

CAUTION



BIOHAZARD

**Strict isolation area
Authorised personnel only**

better Making
life better
Making life



Basic PPE Needed

Head cover

Eye and face shields

N95 Mask

Disposable scrubs with
gown/suit over

Double gloving

Plastic apron



Do final check of all PPE and
adjust where necessary,
ensuring that person is well
protected and comfortable

Final Check

- Any exposed skin
- Position of Gloves
- Breaches in the seams
- Comfort and practicality



Patient care cont..



- The patient's clinical condition deteriorated rapidly.
- He had macroscopic hematuria, worsening of purpuric skin lesions and hematomas,
- Fulminant hepatic failure,
- Severe respiratory insufficiency, encephalopathy
- Hypoglycemia, and severe metabolic acidosis
- The patient had distributive shock
- Oliguric renal failure
- Very high liver-enzyme levels and persistent metabolic acidosis.
- **All signs and symptoms of Crimm Congo Fever !**
- 25/10/2022 @ 07:30 patient in asystole. Resuscitation attempt unsuccessful, patient demised

Post exposure management



■ Contact Tracing

- All Possible contacts was informed
- All exposed staff monitored

■ Management of the diseased

- All steps taken to ensure safe transportation of the deceased.
- NW DOH – Cannot assist
- NICD- Could not advice
- After several calls DOH - a local funeral parlor can mange corpse until results available



■ Cleaning

- All removable items was removed and managed as biohazards medical waste- Company informed
- Room and non movable assists cleaned according to TIER 2 protocol

The final diagnoses



- Investigation on exposure prior to illness done
 - Used Kaput poison for killing of weed.
 - Assisted with blazing of veld fire -possibility of tick bite
 - 2 famers presented with the same symptoms
- DOH Environmental Specialist visit to farms
- 26/11/2022 NICD informed local laboratory
 - Crimm Congo Fever negative
 - Rickettsia PCR positive
 - **Questions unanswered.**
 - Would Doxycycline have made a difference?
 - Why was 1st rickettsia test negative?
 - Could the poison contributed to the DIC?
 - Cause of rapid progression of illness?
 - Is it a true diagnoses?



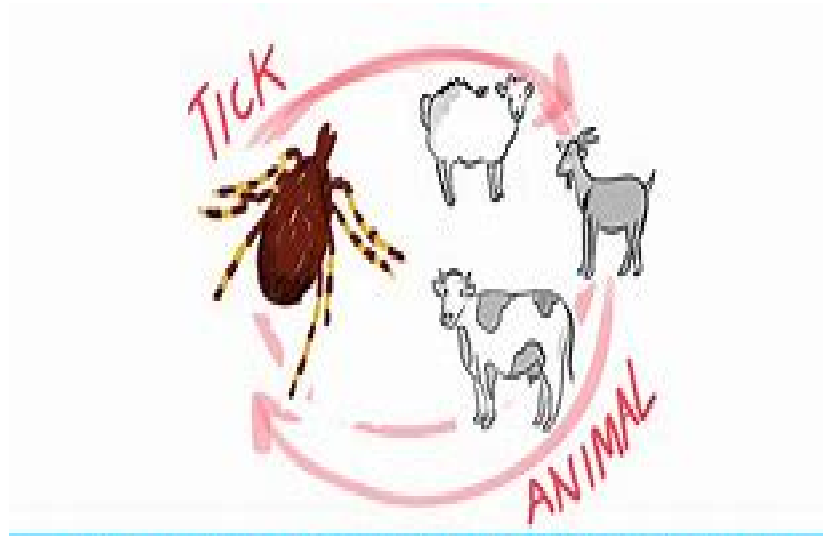
Identified risks



- Outbreak manual – Isolation area
- PPE
- Involvement of multi disciplinary team
- Contact information of DOH
- Availability of highly infectious disease facilities
- Contact exposure
- Receiving final feedback from NICD



Questions ?



“There is nothing so patient, in this world or any other, as a virus searching for a host.”