NOTA KURSUS: VAPE DAN PENYAKIT E-CIGARETTE AND VAPING ASSOCIATED LUNG INJURY (EVALI)

TARIKH: 27th MAC 2022

VIA : WEBEX

DISEDIAKAN OLEH : DR SITI NOOR AZLIDAH BINTI ALI

1. Electronic cigarette is originated from China and brought into Malaysia since 2013 and was evolved into many generations. It also became phenomenal in Malaysia since 2015.
2. E-cigarette are battery-powdered previously cigaretted-shape devices that vaporize a liquid solution which is inhaled orally.
3. Content of e-cigarette fluid are, nicotine, propyline glycol, vegetable glycerine and flavour.
4. 2 types of e-cigarette – open & closed system.
5. Nicotine caused higher dependency level than heroin, cocaine, alcohol, caffein & cannabis
6. Review done in 2015 showed increasing evidence indicating harmful use of e-cigarette/vape
7. For ex-smokers and non -smoker, use of e-cigarettes will increase the risk of harm on health
8. E-cigarette are highly addictive and the is insufficient evidence on the safety of long-term use of nicotine
9. Clinical presentation of EVALI (e-cigarette and vaping associated lung injury) are fever, tachycardia, tachypnoea and hypoxia.
10. For lab test showed elevated white blood cell, mild elevated liver enzymes, elevated ESR, creatinine and electrolytes imbalance.
11. For imaging usually showed abnormal chest xray (non specific bilateral opacities) or CT scan( bilateral diffuse and basilar ground glass opacities with sub pleural sparing.
12. Treatment for EVALI:
    1. Empiric antimicrobials, including antiviral, should be considered in accordance with established local guidelines and microbiology pattern.
    2. Documented corticosteroid treatment : initial daily dose iv methylprednisolone 125mg/day , oral prednisolone 40mg/day
    3. Total duration of therapy : 11days
13. There is no evidence on the use of hydrocortisone, dexamethasone and inhaled corticosteroids in EVALI.
14. Criteria to diagnose EVALI (Confirmed) based on CDC Atlanta:
    1. Using an e-cigarette(vaping) or dabbing in 90 daygs prior to the symptoms onset
    2. Pulmonary infiltrate on lain CXR/opacities on CT
    3. Absence of pulmonary infection on initial work-up : negative respiratory viral panel, negative influenza PCR/rapid test, all other clinically-indicated respiratory ID testing negative
    4. No evidence in medical record of alternative plausible diagnosis(e.g. cardiac, rheumatologic or neoplastic process
15. Clinical presentation of EVALI during covid-19 pandemic is fairly non-specific and may appear remarkably similar in between Covid-19 and EVALI.
16. 3 patterns between Covid-19 vs EVALI were observed:
    1. Lymphopenia vs Leukocytosis
    2. Youth who vapes and presents with Respiratory Failure more suggestive of EVALI
    3. Improvement within 1 to 3 days with corticosteroids to be highly suggestive of EVALI