Palliative Care Tip – Issue#6:

APPROACH TO INFECTIONS IN ADVANCED DISEASE/Revised July 2018

Diagnosis of infection in people with advanced stages of illness depends in part on recognizing the classical signs and symptoms of infection, namely: fever, leukocytosis and localizing symptom of infections such as cough and dysuria or inflammatory signs such as, localized erythema. However, these symptoms may be blunted due to loss of inflammatory response, concurrent use of corticosteroids, acetaminophen, or anti-inflammatories. Fever and leukocytosis may also be caused by neoplasia. Therefore, other secondary signs should be looked for, such as: delirium, rapid functional decline, tachycardia and tachypnea, hypotension, oliguria and abruptly increasing pain. Blood cultures, if positive, are diagnostic (with the exception of Staphylococcal epidermidis, which *may* be a skin contaminant); however, false negatives are frequent and because results are not immediately available, they should not be the sole factor determining treatment. Both sputum and urine can be colonized in the absence of infection and, therefore, positive results must be interpreted in clinical context.

Decision to treat: The goals of treatment of are 1) life prolongation (no established evidence) 2) symptom control. However, the antimicrobial therapy may involve adverse outcomes such as acquisition of multi-drug resistance organisms, access to intravenous lines, drug-drug interactions, reactions, clostridium difficile infection, prolonged isolations, etc. while diagnosis of infection itself is challenged. The risks are higher as the performance status declines. The treatment decision should depends on the patients' values and disease stage. If life-prolongation is deemed appropriate, then the infection should be treated. Risk versus benefit will need to be considered especially with escalation to more toxic anti-microbial regimes. Treating infection may be the most appropriate means of symptom control when life-prolongation is not the goal. For example, uncontrolled pain in an ulcerated head and neck cancer may respond to antibiotic therapy and treating pneumonia may relieve dyspnea.

Treatment: Antibiotics can be given either orally or intravenously. Oral administration is more convenient, especially in the home setting. Cotrimoxazole, Metronidazole, quinolones and Clindamycin, all have high oral bio-availability in people in early disease trajectories. The effectiveness of oral antibiotics for initial treatment of sepsis has to date only been studied in low risk patients. People with advanced stage of illness often have unreliable oral absorption because of existing symptom of nausea and vomiting or a disrupted gastrointestinal tract. Intramuscular injections are avoided because of the risk of haematoma or sterile abscess formation.

Symptomatic fevers should be treated with Acetaminophen unless contraindicated. Regular administration will help avoid temperature swings which are a major source of discomfort. External cooling through fans or ice without lowering the temperature set point will increase shivering and patient discomfort. Fluids should be cautiously given to counteract third spacing, and preserve renal function.

If the infection does not respond to initial therapy, the following should be considered:

- Resistant or super-imposed, secondary, infection. The patient should be re-cultured and the antibiotic changed as appropriate.
- Abscess formation.
- Atypical infection (fungal, pneumocystis, tuberculosis)
- Paraneoplastic syndrome
- Drug fever
- Re-examine the balance between benefit and harm in the context of limited survival time

Suggested reading:

Macedo F, et al. Antimicrobial therapy in palliative care: an overview. Supportive Care Cancer 2018;26:1361-67.

EDMONTON ZONE – PALLIATIVE AND END OF LIFE CARE

AUTHOR/REVIEWER: [ORIGINAL CONTRIBUTOR AND UPDATES: CATHERINE JENKINS, MD, VINCENT THAI, MD, ANN HOUT MD. EDITOR: YOKO TARUMI, MD. DIVISION OF PALLIATIVE CARE MEDICINE, UNIVERSITY OF ALBERTA]

LAST REVISION DATE: [REVISED JULY 4,2018]