FOOT COMPLICATIONS AND CANCER

In oncology there is no focus yet on foot complications as a result of anticancer treatments. These complications however, are common, have a considerable impact on quality of life and may lead to modifying or ceasing treatments. [1-4] No guidelines for safe and effective care have been developed for foot problems as a result of anti-cancer treatments. This is in contrast with worldwide protocolized foot care for diabetic and rheumatoid arthritic patients, of which their feet are ranked as high risk because a lack of care may lead to amputation or even death. The lack of protocolized foot care in oncology is puzzling since complications may develop at a faster pace than in diabetic and arthritis patients. The complications can be just as dangerous and need to be addressed, especially with the knowledge that the number of cancer patients is increasing substantially every year.

Lacouture, one of world's leading expert on dermatologic complications after anti-cancer treatments, is one of the few that is aware of these problems: "Dermatologic toxicities are diverse and can have an enormous impact on the cutaneous health of patients, overall costs of treatment, healthcare related quality of life and consistent anticancer therapy".[5]

Most common complications resulting from anti-cancer treatments are:

- Chemo induced polyneuropathy (CIPN)
- Hand-foot syndrome
- Hand-foot-skin reaction (e.g. extreme callus formation)
- Nail toxicity and infections

CIPN occurs frequently and is one of the most serious complications associated with anticancer drugs.[6] CIPN leads to a lower quality of life and dysfunction of the sensory, motor, and autonomic systems, and often causes patients to discontinue chemotherapy.[6] It is usually misdiagnosed, undertreated and guidelines to assess and manage CIPN vary greatly.[6, 7] Unfortunately, CIPN can be a lifelong complication.

Hand-foot syndrome due to chemotherapy and hand-foot skin reaction due to targeted therapy incidence range from 6% to 64% depending on the compound, combination and dose.[1] Hand-foot skin reaction grade 3 (moist desquamation, ulceration, blistering, or severe pain of the hands or feet), occurs in 20% of the patients, causes the patient to be unable to work or perform self-care activities of daily living.[2]

Hyperkeratotic hand-foot skin reaction is another painful complication seen most frequently during the early weeks of use with targeted therapy. Hyperkeratotic plaques develop predominantly over sites of pressure or friction. Plaques may have significant inflammation.[3]

Nail toxicity varies between 19% to 44% depending on compounds, combinations and dose.[8] Nail changes due to disruption of the nail folds frequently require intervention including dose modifications.[8] Paronychia, onycholysis, granulation tissue formation and subungual abscesses with potential secondary infection are often so painful that they interfere with activities of daily living and significantly impair patient's quality of life.[8]

References

- 1. Miller, K.K., L. Gorcey, and B.N. McLellan, *Chemotherapy-induced hand-foot syndrome and nail changes: a review of clinical presentation, etiology, pathogenesis, and management.* J Am Acad Dermatol, 2014. **71**(4): p. 787-94.
- 2. McLellan, B., et al., Regorafenib-associated hand-foot skin reaction: practical advice on diagnosis, prevention, and management. Ann Oncol, 2015.
- 3. Macdonald, J.B., et al., *Cutaneous adverse effects of targeted therapies: Part I: Inhibitors of the cellular membrane.* J Am Acad Dermatol, 2015. **72**(2): p. 203-18; quiz 219-20.
- 4. Gomez, P. and M.E. Lacouture, *Clinical presentation and management of hand-foot skin reaction associated with sorafenib in combination with cytotoxic chemotherapy: experience in breast cancer.* Oncologist, 2011. **16**(11): p. 1508-19.
- 5. Lacouture, M.E., *Dermatologic Principles and Practice in Oncology. Conditions of the skin, hair, and nails in cancer patients.* 2014: Wiley Blackwell.
- 6. Park, H.J., *Chemotherapy induced peripheral neuropathic pain*. Korean J Anesthesiol, 2014. **67**(1): p. 4-7.
- 7. Piano, V., et al., *Guidelines for neuropathic pain management in patients with cancer: a European survey and comparison.* Pain Pract, 2013. **13**(5): p. 349-57.
- 8. Capriotti, K., et al., *The risk of nail changes with taxane chemotherapy: a systematic review of the literature and meta-analysis.* Br J Dermatol, 2015.