

Pain in Cervical Cancer

Cervical cancer is the sixth most common malignancy, with almost one-half million new cases diagnosed each year worldwide. In developed countries with access to early cytological detection of cervical cancer (such as the Papanicolaou or Pap test), mortality has diminished greatly. However, in other world regions, including Central America, southeast Africa, and India, incidence and mortality rates remain high. Currently, more than 80% of all cervical cancer deaths occur in developing countries. Vaccination against human papillomavirus (HPV), the infectious agent known to cause cervical cancer, shows promise in reducing the prevalence of this deadly cancer.

Common Etiology of Pain

- Nociceptive pain:
 - Somatic
 - Soft tissue
 - Bone infiltration
 - Visceral
- Neuropathic pain
 - o Neural infiltration by the tumor can cause lumbosacral plexopathy.
 - Radiotherapy can cause plexopathy one to several years later and tends to cause motor disturbances more often than pain.
 - o Some chemotherapeutic agents (e.g., taxane-based agents and platinum-type drugs) can cause painful neuropathy.
- Psychological, social, and cultural issues may modify the pain experience.
- Long-term effects of cancer treatment can include changes in tissues in the radiotherapy treatment field such as osteoporosis and pelvic fractures, lymphedema of the lower extremities, and fistula formation (rectovaginal or vesicovaginal). All of these effects can cause significant persistent pain.

Evaluation of Pain

The following must be evaluated at each visit so as not to miss new developments:

- The nature of the pain: Plexopathy often causes aching, stabbing, or pressure-like pain.
- The site of pain: Record on a body chart to identify new pains that develop with disease progression.
- Palliative or provocative factors that modify pain, including emotional status, bowel function, and the
 effect of movement.
- Lumbosacral plexopathy may result from involvement of the lumbar plexus (formed by the ventral rami of L1–L4), lumbosacral trunk (L5–S1), or sacral plexus (S1–S3). It may cause both sensory and motor disturbances; dysesthesias are possible, but they are relatively uncommon. It may have sympathetic involvement, in which case a "hot and dry" foot is a possible manifestation.

Principles of Management

- Modifiable factors should be corrected. Is there a realistic possibility of palliative radiotherapy, chemotherapy, or surgery?
- The World Health Organization's three-step analgesic ladder should guide pain management for the majority of patients.
- The possibility of associated renal dysfunction must be considered when choosing opioids or nonsteroidal anti-inflammatory drugs (NSAIDs).
- Aggressive treatment of side effects is essential for success in pharmacotherapy.
 - The intra-abdominal disease itself might cause nausea and vomiting; opioids or NSAID-induced gastritis can make the problem worse.

- Constipation may worsen pain in pelvic disease.
- Opioids are likely to be at least partially successful in treating pain from plexopathy.
- Corticosteroids may be beneficial in nerve compression.
- Neural infiltration pain may respond to tricyclics and/or anticonvulsants.
- Ketamine therapy may be necessary to treat any central sensitization pain.
- Continuous epidural analgesia is warranted in patients resistant to standard pharmacotherapy.
- Bilateral percutaneous neurolysis of the superior hypogastric plexus is said to be beneficial, but the evidence base is poor.
- Subarachnoid neurolysis is reserved for permanently bedridden patients who already have bladder and bowel incontinence.

References

- Chan JK, Berek JS. (2007). Impact of the Human Papilloma Vaccine on Cervical Cancer. J Clin Oncol 2007;25:2975–82.
- 2. Ikushima H, Osaki K, Furutani S, Yamashita K, Kishida Y, Kudoh T, Nishitani H. Pelvic bone complications following radiation therapy of gynecologic malignancies: clinical evaluation of radiation-induced pelvic insufficiency fractures. Gynecol Oncol 2006;103:1100–4.
- 3. Schiffman M, Wacholder S. From India to the world: a better way to prevent cervical cancer. New Engl J Med 2009;360:1453–5.
- 4. World Health Organization. Global cancer rates could increase by 50% to 15 million by 2020. Available at: http://www.who.int/mediacentre/news/releases/2003/pr27/en/.

