

MEditorial December 2009

Testis Cancer

As a Urologist, I see about 3-5 new cases of testis cancer yearly. This past year has been interesting, in that I have diagnosed more cases than usual (there is data that the incidence of testis cancer is rising); and the average age of men so diagnosed by myself has been in the mid-50's. It is more typical to see testis cancer in younger men, often late teens to late 30's.

Many men come in worried that a lump or swelling in the scrotum represents cancer. Fortunately, most of these abnormalities are benign. Tiny nodules, often smaller than a raisin, are oftentimes cysts--and on careful exam, are actually in the appendages/structures next to the testis but not in the testis per se. Benign conditions raising concern for testis cancer include hydroceles (accumulation of fluid around testis within its surrounding membranes); spermatoceles (cysts of the epididymis, the 1st part of the sperm transport duct between testis and vas deferens); varicoceles (engorged, snake-like veins often predominating on the left side); epididymitis, a swelling of the sperm ducts sometimes due to bacterial infection transmitted from the prostate/urinary tract; and nonspecific cysts which may originate in the coatings of the testis.

This brings up a good point. Unlike kidney cancer, which is most often diagnosed "by accident" on an abdominal ultrasound or CT done for unrelated reasons; or bladder cancer, usually diagnosed cystoscopically

after the finding of blood in the urine, testis cancer is most often found on self-examination by the man himself. Testis self-exam is a prudent idea, and assumes one is familiar with his testes to begin with, so as to enable detection of a significant difference. I advise once monthly self-exam, preferably with wet/soapy hands in the shower. This setting usually makes an exam more comfortable, especially since the testes hang down more in the warmth of the shower. Since testis cancers grow rapidly, it is not uncommon to notice a hard lump @ least the size of a grape or marble as the 1st sign of disease.

Testis cancer is really not too common. There are about 8000 new cases diagnosed per year in the US with close to 400 (5%) cancer-related deaths. In comparison, there are 190,000 new cases of prostate cancer per year with 27,000 deaths; (14%) and 200,000 new cases of breast cancer per year with about 40,000 deaths (20%).

Testis cancers (most commonly “germ cell tumors” due to their origin from primitive cells that ultimately produce sperms) rarely causes pain, but we sometimes see pain from hemorrhage within certain types of rapidly dividing tumors. Ultrasound of normal-feeling testes, just as screening for testis cancer or trying to relate some type of chronic scrotal pain to a “silent” cancer seldom worthwhile. Ordering an ultrasound for a lump suspicious for testis cancer is not unreasonable but in many cases, not needed.

If testis cancer is suspected, the first step is usually exploration of the testis not through the scrotum but via the groin (corner of lowermost abdomen). When significant doubt is present, an intraoperative ("frozen section") biopsy can be done with the intent of leaving in the testis if the biopsy shows no cancer. Testes so biopsied/left in do hurt more and take their time healing—and rarely end up being removed @ a later time. . More commonly, the testis, along with a significant segment of its spermatic cord, is removed without doing an intraoperative biopsy. About 90- 95% of these hard nodules within the testis will turn out to be cancerous.

Certain types of testis germ cell cancers, usually “non-seminomas” can produce biochemical “markers” in the bloodstream that are traceable and give a good indication of disease control versus progression. Alpha fetoprotein (AFP) and beta-human chorionic gonadotropin (B-HCG) are a few of the common ones. Seminoma, a very common germ cell tumor, rarely if ever produces these substances.

Many men are cured of testis cancer by the testis removal (radical orchiectomy) alone. Besides markers/blood tests, it is common to “stage” the disease, usually following testis removal, with CT scans from the chest to the pelvis. The cancer can then be “stratified”, with higher stages representing higher risk categories for actual or potential disease. More aggressive treatments are aimed at more advanced disease.

For early stage seminomas, there has been a bit of a trend away from radiation to the retroperitoneal lymph nodes (located in back of the intestines), due to potential side effects, concern about secondary malignancies (1.5 to 2X risk compared to these not radiated), and the relatively low (15%) chance of recurrence if the initial metastatic evaluation including CT is negative. Men who do recur can usually be salvaged with radiation and/or chemotherapy. There are also studies indicating that fairly low dose, single agent chemotherapy, e.g., Carboplatinum, may be as good as (or even better than) the routine recommendation to radiate lymph nodes in those choosing treatment of seminoma, beyond orchiectomy.

Non-seminoma germ cell tumors, also known as NSGCT (e.g., embryonal, choriocarcinoma, etc.) may act more aggressively than seminoma. Observation for early disease can be appropriate in those wishing to be spared the side effects of further surgical or chemotherapy. With observation for early stage disease, there is a 25-30% recurrence rate. Additional treatments for suspected or actual spread of NSGCT to lymph nodes or other organs includes removal of lymph nodes (radical retroperitoneal lymphadenectomy) and chemotherapy. For early disease, it seems only two courses of chemotherapy, usually well tolerated and less prone to causing delayed side effects, will increase the long-term cure rate considerably. Lymphadenectomy seems to be slightly falling out of favor, since it is a big operation, to be done by a urologist very experienced in the procedure; and it has risks of intestinal problems, vascular and nerve injuries, ejaculatory dysfunction, and lymphatic leakage. Also, patients found to have malignant nodes by this operation not uncommonly end

up needing chemotherapy, anyways. Chemotherapy, especially beyond two courses, can have temporary or permanent potentially serious side effects involving many systems of the body--and just like radiation, carries with it an increased risk of secondary malignancies often occurring within 10 years of initial treatment. However, such chemotherapy is highly effective against these tumors.

Issues of fertility are also of concern to the often youthful testis cancer patient, not only due to internal scatter (to the externally shielded opposite testis) during retroperitoneal radiation and from chemotherapy , but also due to the known a priori association between testis cancer and poor sperm counts. Sperm banking during the course of testis cancer treatment may be advised to the man still wanting to have a family.

The choice of how to deal with testis cancer beyond the simplest uncontroversial treatment (removal of the involved testis) is complex and requires considerable discussion between the patient/family, his urologist, and often one or more oncologists.

The good news is, that even men with advanced disease (e.g., as exemplified by Lance Armstrong) can be cured--and the current overall cure rates are well above 90%.

Have a happy and healthy Holiday Season!

Dr. Alan Freedman

401 Old Newport Blvd., Suite 101

Newport Beach, CA 92663

Phone: (949) 645-3434

FAX: (949) 645-0277