**CLINICAL VIGNETTE**

# Atypical Ductal Hyperplasia – Is It an Ice Cube or the Tip of an Iceberg?

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***Case Report***

A 56-year-old woman with hypertension and hypothyroidism came in for follow-up after a recent mammogram and subsequent biopsy. Her routine screening mammogram showed calcification with grouped distribution measuring 4 mm in the right breast, upper hemisphere at posterior depth. This was new in comparison to her previous screening mammogram. It was suspicious enough to warrant a digital diagnostic mammogram and right breast ultrasound which again demonstrated punctate calcifications without obvious mass. She proceeded with a core biopsy which was interpreted to be atypical ductal hyperplasia (ADH), along with areas of usual ductal hyperplasia. Patient had significant concerns with regards to her diagnosis with high levels of anxiety.

She is married and working in customer service and does not smoke or use alcohol. Her family history is significant for breast cancer in her mother who was diagnosed in her 70s. Her mother underwent successful mastectomy. There is no history of ovarian cancer.

Physical examination included normal vital signs and BMI of 26.6. The rest of her physical examination was within normal limits. Labs included normal CBC and chemistries. No dominant masses or lymph nodes were palpable. Breast exam was remarkable for post biopsy ecchymosis in the upper outer quadrant of the right breast.

***Treatment Course***

Patient was referred for surgical consultation, who obtained breast MRI imaging which did not show any obvious correlate to the biopsy proven area of disease. The area of concern was best estimated mammographically. She eventually underwent excisional biopsy to this area with pathology confirming ADH. No definitive evidence of ductal carcinoma in situ (DCIS) was noted. She was referred to medical oncology for discussion regarding preventative hormonal therapy, but declined due to concerns over potential side effects and long-term toxicities. She was not on hormone replacement therapy at the time of diagnosis.

***Discussion***

With the implementation of widespread mammographic screening, many cases of benign breast disease have been detected. It is estimated that mammographic screening has increased the detection of benign disease processes by two to four-fold.[1] One of the more common findings is Atypical Ductal Hyperplasia (ADH). This carries an elevated risk of developing breast cancer, with some estimates as high as a five-fold risk within five years.[2]

ADH can resemble low grade ductal carcinoma in situ (DCIS). Because of this, ADH on core needle biopsy is frequently upgrades to DCIS on excision. One study showed the upgrade rate of ADH to DCIS at 22.6% and to invasive cancer at 5.0%.[3] Because of this high upgrade conversion rate, clinical preference is typically to excise the area of concern for better pathologic sampling. However, from a statistical standpoint, the majority of ADH will not be upgraded and therefore, reassurance is important for women as they navigate their diagnostic evaluation. This has prompted studies to better identify patients with lower risk of having a malignancy who can be managed conservatively with observation rather than surgery. One study tried to identify a lower risk group defined as those less than 50 years old, with a small lesion size of <1.5 cm that was detected on screening mammogram with atypia limited to 1 foci. The upgrade rate in this group was only 5.6%.[4]

Once diagnosed, National Comprehensive Cancer Network (NCCN) guidelines suggest clinical encounters every six to twelve months, annual screening mammogram to begin at diagnosis but not prior to age 30, consideration of annual breast MRI at diagnosis but not prior to age 25, risk reduction strategies, and patient breast awareness in order to report any changes to their health care provider.[5] Risk reduction strategies include chemoprevention with drugs such as tamoxifen in premenopausal women or tamoxifen, raloxifene, or aromatase inhibitors in postmenopausal women. Currently, the US Preventative Services Task Force (USPSTF) recommends that clinicians offer to prescribe risk-reducing medications, such as tamoxifen, raloxifene, or aromatase inhibitors, to women who at increased risk for breast cancer and at low risk for adverse medication effects.[6] However, due to potential side effects of these drugs such as elevated risk for endometrial cancer with tamoxifen, osteopenia with drugs like anastrazole, along with symptoms such as hot flashes and mood changes, compliance and acceptance of hormonal prevention strategies is low. Alternatively, life modifications can be implemented. NCCN recommends patients employ life style changes to reduce risk. These include limiting alcohol consumption to no more than one drink equivalent per day, taking part in 150-300 minutes of

moderate-intensity physical activity per week, and maintaining a body weight in the range of 20-25 BMI).[7]

### *Conclusion*

The diagnosis of ADH is frequently encountered in today's era of widespread screening mammography. While current preference is for surgical excision for fears that ADH may be the tip of an iceberg, studies are evaluating the role of nonsurgical management in low risk patients where ADH may just be an ice cube. Ultimately, after diagnosis, risk reduction strategies to prevent future breast cancer can be discussed.

## REFERENCES


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