Cervical Cancer in Guatemala: Using Visual Inspection with Acetic Acid Screening to Reduce Incidence of and Mortality from Cervical Cancer

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Abstract

Guatemala is a developing nation of nearly 16 million in Central America. Among the many health problems the nation suffers, cervical cancer remains a leading cause of cancer-related death. Cervical cancer, an easily detectable cancer, predominantly affects women in developing nations. Traditional cytology techniques have been used to screen women in the country for over 25 years, but less than 10% of the Guatemalan population is screened. The Visual Inspection with Acetic Acid (VIA) is a simple produce that uses acetic acid to visualize precancerous cervical lesions and has been proven to be more effective in resource-poor settings. The screening is less financially burdensome, requires basic supplies and fewer trained professionals, and can be performed and treated in one single visit. While Guatemala has implemented VIA screening in high-burden areas, it is critical that the nation expand screening programs so that more women have access to treatment.

Background

• Guatemala is a nation of 16 million people
• 54% of the population lives below the national poverty line.

Figure 1. Global Distribution of Cervical Cancer in 2002. Over 80% of cervical cancer deaths occur in developing nations. (Modified from rho.org)

• Cervical cancer is the most common cancer in Guatemalan women, occurring in 17 per 100,000 women.1
• In 2005, less than 10% of Guatemalan women were screened.1
• In 2013, the Guatemalan Ministry of Health reported 496 cases of cervical cancer.2
• In Latin America, a recent doctor’s visit, increased education and more money all correlate to more preventative measures and a recent Pap smear.3
• A woman screened once in her lifetime reduces the risk of cervical cancer by 25-36%.4

Figure 2. A normal and pre-cancerous cervix. A is a normal cervix and B is a cancerous cervix as evidenced by the white spot. (Modified from Rao).6

• Traditional cytology (Papanicolaou smear) requires more infrastructure, many trained personnel and separate visits for screening, receiving results and treatment.
• Visual Inspection with Acetic Acid (VIA) involves visual inspection for damage followed by placing acetic acid or Lugol’s iodide to visualize precancerous lesions, which turn white (Figure 2).3

Some Advantages of VIA 5

Basic supplies
Less financially burdensome
Fewer trained personnel needed
Training is simple
Laboratory is not necessary “Screen and Treat”

Screening Technique

•VISAs performed
Female Population
% Screened
94
1878
5.0%

Table 1. 2014 rate of VIA screening through September 19 in San Mateo, Guatemala.

VIA in Guatemala

• Over 90% of rural Guatemalan women in the pilot study agreed to the VIA, indicating no clear cultural beliefs that would make widespread VIA screening difficult.
• The Cervical Cancer Regional Strategy and Plan of Action introduced VIA screening to 8 “high burden” health areas in Guatemala in 2008.8
• In 2010, 214,046 cervical cancer screenings were performed in Guatemala. 61% used VIA and 49% of women were treated in the same visit.3
• In San Mateo, Quetzaltenango, Guatemala, only 5.0% of the eligible population was screened in the first 38 weeks of 2014 (Table 1).

Conclusions and Recommendations

• VIA is an effective method for screening for cervical cancer in resource-poor settings, including Guatemala.
• Expand VIA screening in Guatemala and develop a specific budget for these screenings, which does not currently exist.
• Explore the possibility of using the HPV vaccine, which the government has expressed interest in.8
• Address the social determinants of health underlying poor screening including education, specifically about preventative medicine and STIs, and access to health centers, especially in the rural areas.

References