Screening for cervical cancer in French Guiana: screening rates from 2006 to 2011

M. Douine · T. Roué · C. Lelarge · A. Adenis · N. Thomas · M. Nacher

Received: 29 June 2015; Accepted: 15 September 2015
© Société de pathologie exotique et Lavoisier SAS 2015

Abstract In French Guiana, the age-standardized incidence rate of cervical cancer is four times higher than in France and the mortality rate 5.5 times higher. A survival study revealed that stage at diagnosis was the main factor influencing the prognosis, showing that early detection is crucial to increase cervical cancer survival. The present study aimed at evaluating the cervical cancer screening rate between 2006 and 2011 by age and for a 3-year period in French Guiana. All pap smears realised in French Guiana were analysed in two laboratories allowing exhaustive review of screening data. The screening rate was estimated at about 54% from 2006 to 2011, with a statistical difference between coastal and rural area (56.3% versus 18.7%). Although the methodological difference did not allow comparisons with metropolitan France, these results could be used to evaluate the impact of organised cervical cancer screening by the French Guiana Association for Organized Screening of Cancers which has been implemented in French Guiana since 2012.

Keywords Screening · Cervical cancer · French Guiana · Pap-smear · French Guiana · Overseas department

Résumé En Guyane, l’incidence du cancer du col de l’utérus est quatre fois plus élevée qu’en métropole, et la létalité 5,5 fois plus élevée. Dans ce vaste département recouvert à plus de 90 % de forêt amazonienne, les difficultés d’accès aux soins, l’âge précoce au premier rapport et le manque de dépistage sont de possibles facteurs explicatifs. Une première étude a montré que le diagnostic tardif était le principal facteur impactant la survie. Un diagnostic précoce - par frottis cervico-vaginal tous les 3 ans de 25 à 64 ans selon les recommandations nationales - est donc crucial pour améliorer la survie. L’objectif de cette étude est d’évaluer le taux de couverture de dépistage par frottis en Guyane entre 2006 et 2011 ainsi que l’activité de réalisation de frottis et le taux de cancers dépistés. Tous les frottis cervico-vaginaux réalisés en Guyane sont analysés dans seulement deux laboratoires d’anatomie pathologique, ce qui permet une analyse exhaustive des données de dépistage de ce département. La date de naissance, la date de réalisation du frottis, l’adresse de la patiente ou celle du prescripteur (selon les laboratoires) ainsi que la date de réalisation du précédent frottis ont été recueillis. Le taux de couverture de dépistage a été évalué à 54 % entre 2006 et 2011, avec une différence significative entre le littoral et l’intérieur de la Guyane (56,3 % versus 18,7 %). L’activité de réalisation de frottis était de 23,5 à 25,8 frottis pour 100 femmes-année. Le taux de diagnostic de cancer était de 191,8/100 000 femmes-année, soit un cancer cervical diagnostiqué pour 521 personnes dépistées. Bien que le taux de couverture de dépistage en Guyane ne semble pas très différent de la métropole, nous ne pouvons réaliser de comparaison statistique du fait de la différence de méthodologie utilisée. Le taux de diagnostic de cancer était de 6 à

Mots clés Dépistage · Cancer · Col de l’utérus · Guyane · Frottis cervico-vaginal · Guyane · Département et région d’outre-mer

Introduction

In women, cervical cancer is the second most frequent cancer and represents the third cause of death by cancer in the world (8). In French Guiana, a French overseas territory of South America, the age-standardized incidence rate of cervical cancer is four times higher than in metropolitan France and the lethality rate 5.5 times higher.

In this vast Amazonian French territory, difficulties to access the health care system, notably in the remote areas, poverty, the early age of sexual relations and the lack of screening are possible determinants of the high incidence and mortality rates. A survival study in this population revealed that stage at diagnosis was the main factor influencing the prognosis, showing that early detection is crucial to increase cervical cancer survival (5). The gold standard for screening is the Papanicolaou cervical smear (pap smear). In France, a pap smear is recommended for each woman from 25 to 65 years old each three years (10). According to the National Cancer Institute in France (INCa), organized screening decreases the incidence and mortality of cervical cancer down to 80% in screened women (11). In French Guiana, lack of medical doctors and socio-economic precariousness could be associated with underscreening. The French Guiana Association for Organized Screening of Cancers (AGDOC) set up organized screening for cervical cancer in French Guiana since 2012. Quantifying screening in French Guiana before this intervention will be useful to guide and evaluate it.

The present observational and retrospective study aimed at evaluating the screening rate of cervical cancer between 2006 and 2011 by age, place of location and for 3-years period in French Guiana, the pap smear activity, and the invasive cancer rate.

Method

All pap smears realised in French Guiana were analysed in two laboratories. The lab in the Public Hospital of Cayenne received smears from its own structure and from all health centres except two. The private lab of Abbeville, in metropolitan France, received smears from private practices, from hospitals of Saint Laurent du Maroni and Kourou, and from two health centres (Apatou and Grand Santi). All person having had a pap-smear in French Guiana between 2006 and 2011 processed in Abbeville lab or in Cayenne Hospital, whatever the age where included in the study.

The anonymized databases were collected in those two labs after information of women. Posters had been previously placed in all structures doing pap smears in French Guiana, explaining that some of the data concerning all those tests realized between 2006 and 2011 would be used for statistical analysis: date of birth of the patient, date of pap smear, place of location, date of previous smear, personal identification (ID) number and prescribing doctor’s address. If the person was opposed to this, she could contact the coordinator of the study.

To estimate the screening rate of cervical cancer, only the first pap smear for each women for a 3-years period must be counted. For that we used two different variables: the ID number for data from Cayenne Hospital; and the existence, and if so, the date of an anterior pap smear for data from Abbeville lab. As we could not match the data between the two databases, we hypothesized that women always consult in the same place for a pap smear.

Two 3-years periods were studied: 2006 to 2008 and 2009 to 2011.

The difference of the screening rate between locations was evaluated for the 2009-2011 period using the location of the pap-smear prescriber for data from Abbeville lab and the address of the patient for data from Cayenne Hospital. In fact patient address was not available for data from the Abbeville lab. Location was divided between coastal areas (from Cayenne to Saint Laurent du Maroni) and rural areas (all the interior of French Guiana). This arbitrary division, often used in local studies, is based on the existence of roads and the proximity of one of the three hospital of French Guiana. The comparison of the two rates was realized with direct standardisation based on French Guiana population.

Population data by age, gender, and place of location were issued of the National French Institute of Statistic and Economical Studies (Insee). Those data were available for years 2003, 2008, and 2012. Estimations of the target population for each period have been made using population progression rates between each year.

The screening rate was defined by the number of women in an age group having at least one pap smear in a 3-years period divided by the number of women of the same age during this period.

The pap smear activity was defined by the number of pap smears performed in women of 25 to 64 years of age divided by the number of women of the same age by year.