Routine antenatal management at the booking clinic

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Abstract

Antenatal care has been the subject of much interest, both medical and political, since its inception at the beginning of the 20th century. Evidence-based guidelines are now influencing the content and conduct of antenatal care, and of screening for pregnancy complications — both maternal and fetal. This review assesses those aspects of antenatal management at the booking visit that are considered routine for every pregnant woman, identifying areas of proven benefit.

Keywords antenatal booking clinic; pregnancy complications; problem-free pregnancy; routine antenatal care; screening

Introduction

In 2003, the National Institute for Clinical Excellence (NICE) published guidelines on routine antenatal care, which were updated in 2008, however, antenatal care is not a subject that lends itself to the term 'routine'. Every pregnant woman perceives herself as an individual, and thus management of pregnancy needs to be individualized. Nevertheless, all women should be offered at least a minimum standard of care irrespective of where they live. Planning is an important part of service provision and an understanding of those components that are of proven benefit within that service is necessary. This review aims to highlight these areas. In general, women with identifiable risk factors need a programme of care tailored to their individual needs. Main objective of the first antenatal clinic visit, also called 'booking clinic', is to identify women with risk factors who will require a focused and planned care during pregnancy. When a pregnancy is perceived as low risk, a minimum level of care must be outlined, with the capacity to build on this if problems arise.

Antenatal care is an ideal opportunity to enshrine the ideal of "making every contact count".

The first antenatal booking visit

The first antenatal visit is usually to the general practitioner or midwife. This initial visit is the most important visit for all pregnant women. Pregnant women are supported to access antenatal care, ideally by 10 weeks 0 days. The first appointment needs to be scheduled for before 12 weeks. "Saving lives Improving mother's care report 2014", identified that access to antenatal care remains an issue amongst pregnant women who died and ensuring access to appropriate care for all groups must remain part of service planning. More than two thirds of women who died did not receive the nationally recommended level of antenatal care; a quarter did not receive a minimum level of antenatal care.

Because of the large volume of information provided in early pregnancy, two appointments may be required. NICE guideline recommends an early scan for the diagnosis of multiple pregnancy and also for determination of gestational age from 10 weeks 0 days to calculate expected date of delivery. However, the aim of this recommendation is to keep the number of scan appointments to a minimum, especially if it is already known that a woman has a twin or triplet pregnancy. Pregnant women with a low risk singleton pregnancy are cared for by a named midwife throughout their pregnancy.

A properly conducted booking visit is a lengthy process, as it has many objectives and it includes the followings; the provision of information and education, identification of pre-existing health or social problems, review of obstetric and medical problems, lifestyle issues, family history (and thereby assessment of 'risk' in the pregnancy), and counselling for screening tests. Such a review enables the healthcare practitioner to make an assessment of risk, and thereby refer the pregnant woman to the appropriate team(s) for provision of ongoing care during the pregnancy.

Depending on the stringency of the risk criteria applied at booking, 50–80% of women are identified as without major risk at booking. In general, the proportion of nulliparae with no identified risks is higher at booking, as many complications become apparent only as pregnancy and labour progress. A small proportion of women may only develop risk factors after delivery.

The principles of antenatal care for women with uncomplicated pregnancies are to provide advice, education, reassurance and support, to address and treat minor problems arising during pregnancy, to provide effective screening during the pregnancy, and to identify problems as they arise with referral when appropriate.

Identification of risk factors

A full history should be taken, during which risks relating to maternal disease, family history (such as genetic disorders) and previous pregnancy problems should be identified. Structured maternity records with check lists and computerized data collection systems can ensure that important questions are not omitted. It is vital that the history is recorded by someone who is able to recognize risk and that once risks are identified, appropriate measures are enacted. Studies have shown that important identifiable risk factors at booking are missed in as many as 23% of pregnancies.

In the UK, payment for maternity care is made through the Maternity Tariff. This is a risk factor based approach. The tariff is fixed after 14 weeks and so inaccurate labelling of women with risk factors at the booking will lead to financial disadvantage to the unit as the unit will not be reimbursed at the appropriate level for the provision of antenatal care.

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Identification of women at high risk of venous thrombosis

All women should undergo a documented assessment of risk factors for venous thromboembolism (VTE) in early pregnancy or before pregnancy.

Pregnant women at intermediate risk of venous thromboembolism at the booking appointment should be provided specialist advice about their care.

Any woman with four or more current risk factors should be considered for prophylactic low-molecular-weight heparin (LMWH) throughout the antenatal period and this should be continued postnatally for 6 weeks.

Any woman with three current risk factors should be considered for prophylactic LMWH from 28 weeks and she will most likely require prophylactic LMWH for 6 weeks postnatally as well.

Any woman with two current risk factors should be considered for prophylactic LMWH for at least 10 days postpartum.

Identification and care of women with risk of hypertensive disorders in pregnancy

- Women are at an increased risk of pre-eclampsia if they have one high risk factor or more than one moderate risk factor.

High risk factors include:

- Hypertensive disease during a previous pregnancy
- Chronic kidney disease
- Autoimmune disease such as systemic lupus erythematosus or antiphospholipid syndrome
- Type 1 or type 2 diabetes
- Chronic hypertension

Moderate risk factors include:

- First pregnancy
- Age 40 years or older
- Pregnancy interval of more than 10 years
- Body mass index (BMI) of 35 kg/m^2 or more at first visit
- Family history of pre-eclampsia
- Multiple pregnancy.

Women at increased risk of pre-eclampsia should be advised to take 75 mg of aspirin daily from 12 weeks until the birth of the baby. A strategy to ensure that women start their aspirin in a timely fashion is very important, as delay until after 16 weeks makes treatment less effective.

Identification and care of women with pre-existing medical conditions

A thorough history helps to identify women with pre-existing medical conditions for referral to specialist care. Women with medical disorders in pregnancy should have access to a coordinated multidisciplinary obstetric and medical clinic, thereby avoiding the need to attend multiple appointments.

Identification of women with complex social factors

Pregnant women with complex social factors may have additional needs. It is important to identify these women and support them as per NICE Guidelines.

- Women who misuse substances (alcohol and/or drugs)
- Women who are recent migrants, asylum seekers or refugees, or who have difficulty reading or speaking English
- Young women aged under 20 years
- Women who experience domestic abuse

Antenatal care and education

Antenatal care has been proposed as a means of providing education and the opportunity to modulate behaviour in pregnancy. The scope for this might be limited as women gather information from multiple sources such as friends, family and more recently the internet, as a primary source. Indeed, an NHS pregnancy web-page has been established at http://www.nhs.uk/pregnancy. While it is a valuable opportunity to reinforce education, the women who have the most to gain are generally the least likely to effectively utilize prenatal care, especially in the early stages of pregnancy.

Antenatal care and lifestyle

The NICE Guidelines advise pregnant women and those planning a pregnancy to avoid drinking in the first 3 months of pregnancy because of a possible association with an increased risk of miscarriage. Women who choose to drink alcohol during pregnancy are advised not to drink more than 1 to 2 UK units of alcohol, once or twice a week. There is no known 'safe level' of alcohol consumption in pregnancy but no evidence of harm at this level have been reported. The guidelines recommend that women are informed that getting drunk or binge drinking (>5 standard drinks or >7.5 UK units on a single occasion) may be harmful to the fetus.

Much effort has been directed at the ability of antenatal education to reduce smoking in pregnancy. A carbon monoxide (CO) test is an immediate and non-invasive biochemical method for helping to assess whether or not someone smokes. Women should receive information (for example, a leaflet) about the risks to the unborn child of smoking during pregnancy and health benefits of stopping smoking.

Advice on diet and use of supplements before and during pregnancy

Diet in pregnancy

It is important to discuss the woman's diet and eating habits and address any concerns she may have about her diet in early pregnancy. All women should be provided information on the benefits of a healthy diet and healthy eating. Dieting during pregnancy is not recommended as it may harm the health of the unborn child. Healthcare professional should dispel any myths about what and how much to eat during pregnancy, such as that there is no need to 'eat for two' or to drink full-fat milk and to explain that energy needs do not change in the first 6 months of pregnancy and increase only slightly in the last 3 months (and then only by around 200 calories per day). Women with booking BMI >30 should be weighed in every trimester.

Healthy Start

In the UK, health professionals should advise pregnant women about the Healthy Start scheme. They should ensure all women who may be eligible receive an application form as early as