day 1 of Insuflon® administration and after 5 days are shown in Fig. 1*B*. Although the insulin concentrations tended to be higher on average after 5 days, the difference was not significant. No differences in mean blood glucose levels during day 1 and day 5 were detected.

Our results indicate that the absorption and biological efficiency of injected insulin remained basically unchanged after administration via a subcutaneous catheter relative to conventional injections. The use of the subcutaneous catheter for 5 days did not significantly alter the absorption kinetics of the injected insulin. Accordingly, the subcutaneous catheter appears to offer a feasible alternative to conventional injections for the administration of exogenous insulin. Subcutaneous external access ports may carry a high risk of infections (3). No major infection requiring systemic antibiotics and/or surgical treatment was seen, however, in a Swedish survey comprising 22 diabetic subjects using a total of 239 catheters over a 2-mo period (4).

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RIA, radioimmunoassay; ANOVA, analysis of variance; IDDM, insulin-dependent diabetes mellitus.

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Utility of Routine Ophthalmologic Examination in Patients with Gestational Diabetes Mellitus

Few studies have been conducted to determine the need for routine screening ophthalmologic examinations in GDM patients. This study evaluates the results of ophthalmologic examinations performed routinely on GDM patients at our institution over a 4-yr period.

Patients were screened for GDM with the O'Sullivan screening test, consisting of a 50-g oral glucose load given without regard to time of last meal (1). Screening was performed on the first obstetrical visit and between 24 and 25 wk of gestation. A 1-h venous plasma glucose level >135 mg/dl (7.5 mM) was considered a positive test. Patients with a positive test were given a standard 3-h 100-g OGTT after an overnight fast. Patients were diagnosed with GDM if ≥2 of the venous plasma glucose concentrations met or exceeded the following values: fasting, 105 mg/dl (5.8 mM); 1 h, 190 mg/dl (10.6 mM); 2 h, 165 mg/dl (9.2 mM); or 3 h, 145 mg/dl (8.1 mM) (1). Ophthalmologic examination was performed within 2 wk of the diagnosis of GDM.

From January 1986 to January 1990, 80 patients were diagnosed with GDM. Of these, the records of the ophthalmologic examinations were available in 64 (80%) patients. No difference was detected in the age or severity of the GDM between the patients whose ophthalmologic records were available and those whose records were not available. An ophthalmologic exam was performed early (11–23 wk gestation) in the pregnancy in 10 (16%) patients because of early diagnosis of GDM. The remainder of the 64 patients were diagnosed and examined during 24–33 wk of gestation. The mean age for the cohort was 27 yr (range 20–41), and the mean parity was 1.1 (range 0–7).

Our results indicated that of the 64 patients with GDM, none (0 of 64) had evidence of diabetic retinopathy.

This study demonstrates that when the diagnosis of GDM is made the patient is not at risk for diabetic retinopathy. This conclusion is in agreement with the findings of Horvat et al. (2) in their prospective 12-yr study of diabetes in pregnancy. Of 107 patients with GDM in 119 pregnancies, none had retinopathy at the initial exam and none developed retinopathy during pregnancy (2). To our knowledge no other existing studies, prospective or retrospective, address the incidence of retinopathy in GDM. To date, no recommendations are available regarding the necessity of performing a screening ophthalmologic examination in GDM patients.

We conclude from our results, and the results of Horvat et al. (2) support the conclusion, that a screening ophthalmologic examination is not necessary in GDM patients. This represents a significant cost savings with no negative impact on the quality of patient care.

The opinions and assertions stated above are the private views of the

authors and are not to be construed as official or representing the views of the Department of the Army or the Department of Defense.

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GDM, gestational diabetes mellitus; OGTT, oral glucose tolerance test.

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