Corso Residenziale di Formazione per Giovani Medici
AME-FADOI

Giovedì 13 - Sabato 15 Febbraio 2014
Hotel Europa – Bologna

Diabete Mellito a 360 gradi
DIABETE IN OSPEDALE (target glicemici e trattamento)

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Fonti:

ASSOCIAZIONE MEDICI DIABETOLOGI
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SOCIETÀ ITALIANA DI DIABETOLOGIA

STANDARD ITALIANI PER LA CURA DEL DIABETE MELLITO 2009-2010

AACE Guidelines

ENDOCRINE PRACTICE Vol 17 (Suppl 2) March/April 2011

AMERICAN ASSOCIATION OF CLINICAL ENDOCRINOLOGISTS MEDICAL GUIDELINES FOR CLINICAL PRACTICE FOR DEVELOPING A DIABETES MELLITUS COMPREHENSIVE CARE PLAN

Management of Hyperglycemia in Hospitalized Patients in Non-Critical Care Setting: An Endocrine Society Clinical Practice Guideline JCEM 2012

TRIALOGUE

La gestione dell'iperglicemia in area medica. Istruzioni per l'uso

Standards of Medical Care in Diabetes—2014

American Diabetes Association

Diabetes Care Volume 37, Supplement 1, January 2014

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1. Target glicemico
2. Monitoraggio glicemico
3. Farmaci ipoglicemizzanti
4. Schemi di insulinoterapia (passaggio da insulina ev a insulina sc)
5. Terapia nutrizionale
6. Prevenzione e gestione dell'ipoglicemia
7. Educazione terapeutica

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Raccomandazioni “condivise”

- **Pazienti in situazione critica, ricoverati in terapia intensiva, medica o chirurgica: valori glicemici 140-180 mg/dl**

- **Pazienti in situazione non critica: valori pre-prandiali < 140 mg/dl, post-prandiali < 180 mg/dl (E)**

- **Obiettivi più stringenti (110-140 mg/dl sec. ADA) possono essere appropriati in pazienti non fragili e con stretto controllo glicemico pre-ricovero; meno stringenti (<200 mg/dl sec. ES) in caso di comorbidità severe, in pazienti terminali o ad alto rischio di ipoglicemia.**

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monitoring glycemia

- Bedside capillary POC
- Use devices that have demonstrated accuracy of use in acutely ill patients
- Match timing of glucose measurement and the patient's nutritional intake and medication regimen
- Schedule of POC testing: before meal and bedtime in eating patients; every 4-6 h in patients who are NPO or receiving enteral feeding

Umpierrez GE et al, JCEM 2012

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Antihyperglycemic agents

- **Insulin is the drug of choice (rapid half-life; powerful glucose-lowering activity; easy to be titrated to adjust to the changing medical status)**

- *Other classes of noninsulin glucose-lowering drugs are generally not recommended (little flexibility for titration)*

- *For patients whose glycemia was well controlled on oral agents before hospitalization, transition to oral agents in the day or two before discharge is often necessary*

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Raccomandazioni “condivise”

- Salvo indicazione (paziente critico o che non si alimenta) alla terapia infusiva continua con **insulina ev**, la **terapia insulinica sc** è appropriata nella maggior parte dei pazienti
- E’ consigliabile il ricorso a **schemi programmati** di terapia insulinica sc (tipo basal-bolus) affiancati da algoritmi di correzione
- Lo schema “al bisogno” (**sliding scale**), mediante somministrazione di insulina regolare a intervalli fissi, è considerato inadeguato e inefficace ed andrebbe pertanto scoraggiato (non prevede insulinizzazione basale, non previene iperglicemia e comporta rischio di ipoglicemia)
- E’ consigliato l’impiego di **analoghi** dell’insulina nella terapia sc; l’insulina regolare dovrebbe essere utilizzata solo per via endovenosa
- Il ricorso a **CSII** mediante microinfusore è sconisgliato salvo casi particolari.

Schemi terapia insulinica ev

PROCOLLO DI INFUSIONE INSULINICA ENDOVENA E ALGORITMO DI CORREZIONE

(modificato da: Bode BW et al.: Endocr Pract. 2004;10[Suppl 2]:71-80)

1. **INFUSIONE DI INSULINA (regolare)**: miscelare 50 unità di insulina in 500 ml di soluzione fisiologica 0.9%NaCl (= 1 U in 10 ml). Somministrare con pompa di infusione.
2. **PRIMING**: prima di iniziare l'infusione effettuare la "cacciata" (iniettare almeno 50 ml della soluzione nei tubi di infusione per saturare i siti di legame insulinico dei tubi).
3. **TARGET GLICEMICO** = 140-180 MG/DL.
4. **VELOCITA' DI INFUSIONE INSULINICA INIZIALE**: da stabilire da parte del Medico (orientativamente 10 ml/h).
5. Somministrare soluzione glucosata 5% 500 cc (+KCL 10-20 mEq) 63 ml/h (o più, a seconda della prescrizione medica) in via laterale continua.
6. **AGGIUSTAMENTI DELLA VELOCITA' DI INFUSIONE** (V.I.): effettuabili dal personale infermieristico in base al controllo glicemia capillare (GC) ogni 1-2 ore sino a stabilizzazione (almeno 2 valori consecutivi a target) poi ogni 4-6 ore (vedi scheda Aggiustamenti della velocità di infusione)

AGGIUSTAMENTI DELLA VELOCITA' DI INFUSIONE

DATA: ....../....../.............	Cognome e nome: .... Data di nascita: ....../....../.............	Letto nr. ....

GLICEMIA CAPILLARE (mg/dl)	VELOCITA' DI INFUSIONE (ml/h)
<100	ridurre la velocità di infusione di 10 ml/h (se si sta infondendo a velocità uguali e minori di 10 ml/h sospendere l'infusione); - avvisare il medico;
100-139	5
140-180	8
181-220	14
221-259	18
260-299	22
300-339	26
340-379	30
380-419	34
420-459	38
460-499	42
500-539	46
540-579	50
580-619	54
620-659	58
660-699	62
700-739	66
740-779	70
780-819	74
820-859	78
860-899	82
900-939	86
940-979	90
980-1019	94
---	--- e cosi' via..

h._______GC(mg/dl):______V.I.(ml/h)____________

h._______GC(mg/dl):______V.I.(ml/h)____________

h._______GC(mg/dl):______V.I.(ml/h)____________

h._______GC(mg/dl):______V.I.(ml/h)____________

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Management of Hyperglycemia in Hospitalized Patients in Non-Critical Care Setting: An Endocrine Society Clinical Practice Guideline

Basal bolus insulin regimen and transition from iv to sc insulin therapy

- *Starting insulin dose: 0.2-0.5 U/kg of body weight*
- *Transition from iv to sc insulin therapy: initial dose can be determined extrapolating the iv insulin requirement over the preceding 6-8 h (50% as basal and 50% as bolus insulin)*
- *Start sc insulin therapy at least 1-2 h before discontinuation of iv insulin*
- *Patients without a prior history of diabetes receiving iv insulin at a rate of 1 U/h or less at the time of transition may not require a scheduled sc insulin regimen.*

Umpierrez GE et al, JCEM 2012

Terapia insulinica in NA

- NP e NE devono essere somministrate preferibilmente in continuo nelle 24 h
- Se glicemia >250 mg% praticare insulina ev
- Se glicemia <250 mg% praticare una o due dosi sc di analogo lento
- Obiettivo glicemico: 140-180 mg%

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- The use of EN e PN is an independent risk factor for (the onset or aggravation of) hyperglicemia

- Early intervention to prevent and correct hyperglycemia may improve clinical outcomes in patients receiving NE and PN

- For PN, regular insulin administered as a part of the PN formulation can be both safe and effective

- Sc correction-dose insulin is often used

- Separate iv insulin infusions may be needed to treat marked hyperglycemia

Umpierrez GE, et al JCEM 2012

Management of Hyperglycemia in Hospitalized Patients in Non-Critical Care Setting: An Endocrine Society Clinical Practice Guideline

TABLE 2. Approaches to insulin therapy during EN

Continuous EN
- Administer basal insulin once (glargine, detemir) or twice (detemir/NPH) a day in combination with a short- or rapid-acting insulin analog in divided doses every 4 h (lispro, aspart, glulisine) to 6 h (regular insulin).

Cycled feeding
- Administer basal insulin (glargine, detemir, or NPH) in combination with short- or rapid-acting insulin analog at the time of initiation of EN.
- Repeat the dose of rapid-acting insulin (lispro, aspart, glulisine) at 4-h intervals or short-acting (regular) insulin at 6-h intervals for the duration of the EN. It is preferable to give the last dose of rapid-acting insulin approximately 4 h before and regular insulin 6 h before discontinuation of the EN.

Bolus feeding
- Administer short-acting regular or rapid-acting insulin analog (lispro, aspart, glulisine) before each bolus administration of EN.

Umpierrez GE, et al JCEM 2012

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•Programma alimentare individualizzato prescritto preferibilmente da dietista del team diabetologico

TRIALOGUE

La gestione dell'iperglicemia in area medica.

Istruzioni per l'uso

•Dieta senza zuccheri semplici ma con 40-50% di calorie da carboidrati distribuiti nei tre pasti principali

Management of Hyperglycemia in Hospitalized Patients in Non-Critical Care Setting: An Endocrine Society Clinical Practice Guideline

• MNT be included as a component of the glycemic management program (consultation with a nutrition professional)

•**Provide adequate calories to meet metabolic demands**

•Lack of attention to MNT contributes to unfavourable changes in BG

•Many factors may complicate MNT in the hospital: discontinuation of meals in preparation for diagnostic studies or procedures, variability in appetite etc..

•A consistent CHO meal-planning (whole grains, fruits, vegetables, low -fat milk) may help to facilitate glycemic control

•1500-2000 cal per day, with a range of 12-15 CHO servings

Umpierrez GE, et al JCEM 2012

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Premesse "condivise"

- Il timore dell'ipoglicemia è un importante ostacolo al raggiungimento del target glicemico in ospedale
- Il rischio ipoglicemico è aumentato in ospedale
- Fattori predisponenti: età avanzata, scompenso cardiaco, sepsi, insufficienza renale e epatica, ventilazione meccanica, malnutrizione, neoplasie, uso di farmaci ipoglicemizzanti
- Fattori di rischio aggiuntivi: variazioni impreviste di intake calorico (per esami o procedure, vomito) non accompagnate da adeguamento del regime insulinico, interruzione del monitoraggio glicemico, mancato aggiustamento terapeutico in relazione alla riduzione dello steroide.
- Importanza della capacità di riconoscere precocemente i sintomi/segni della ipoglicemia
- Definizione dell'ipoglicemia (<70 mg%) e dell'ipoglicemia severa (<40 mg%)

Management of Hyperglycemia in Hospitalized Patients in Non-Critical Care Setting: An Endocrine Society Clinical Practice Guideline

TABLE 4. Key components of hypoglycemia prevention and management protocol

Hospital-wide definitions for hypoglycemia and severe hypoglycemia.

Guidance on discontinuation of sulfonylurea therapy and other

Reductions in the total daily dose of insulin by approximatly 20% are recommended when BG falls <70 mg%

impairment and for retesting of glucose levels.

Standardized form for documentation and reporting of hypoglycemic events, including severity, potential cause(s), treatment provided, physician notification, and patient outcome.

Umpierrez GE, et al JCEM 2012

TRIALOGUE
La gestione dell'iperglicemia in area medica.
Istruzioni per l'uso

• in cas…
praticar… …sino a
ripresa… …zione

• in ass… …uire la
regola… …dopo
15' ; ri…

15 grammi di glucosio equivalgono a :

- 3 bustine o zollette di zucchero
- Tè con 3 cucchiaini di zucchero
- Brik di succo di frutta
- Mezza lattina di Coca Cola
- 3 caramelle morbide di zucchero

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Raccomandazioni "condivise"

- Durante la degenza (condizione ambientale sfavorevole all'apprendimento) è necessario fornire una educazione di base, tale da rendere il paziente in grado di non correre rischi al rientro al domicilio.
- ***Survival skills***: addestramento al trattamento insulinico (o altro trattamento ipoglicemizzante), all'automonitoraggio glicemico, al riconoscimento-trattamento e prevenzione dell'iper e soprattutto dell'ipoglicemia, ai principi dietetici basilari
- Ruolo diretto e funzioni di coordinamento del team diabetologico (aggiornamento continuo dello staff medico-infermieristico)
- Avvio tempestivo del processo educativo, soprattutto per i pazienti di nuova diagnosi o che iniziano il trattamento insulinico e l'automonitoraggio, al fine di verificare l'apprendimento (del paziente o del care giver) durante il ricovero stesso.

In area chirurgica?

La prevalenza di diabete nei pazienti chirurgici è almeno doppia rispetto a quella riscontrata nella popolazione generale

Il diabete aumenta morbilità, mortalità (+ 50%) e durata del ricovero nei pazienti chirurgici

Reasons for adverse outcomes in diabetic surgical patients

- Hypo-hyperglycaemia
- Multiple co-morbidities
- Complex polypharmacy, including misuse of insulin
- Errors when converting from iv insulin infusion to usual medication
- **Peri-operative infection**
- Failure to appreciate that diabetic patients need a higher level of care
- Failure to identify patients with diabetes
- Lack of institutional guidelines for management of diabetes

Diabet. Med. 29, 420–433 (2012)

Diabetic patients have microvascular and macrovascular pathology that influences their peri-operative course with higher risk of post operative cardiovascular morbidity and mortality

Gil-Bona J. et al. Cir Esp. 2009;85(4):229–37.
Lange CP. et al.. Qual Saf Health Care. 2009;18(2):131–6.

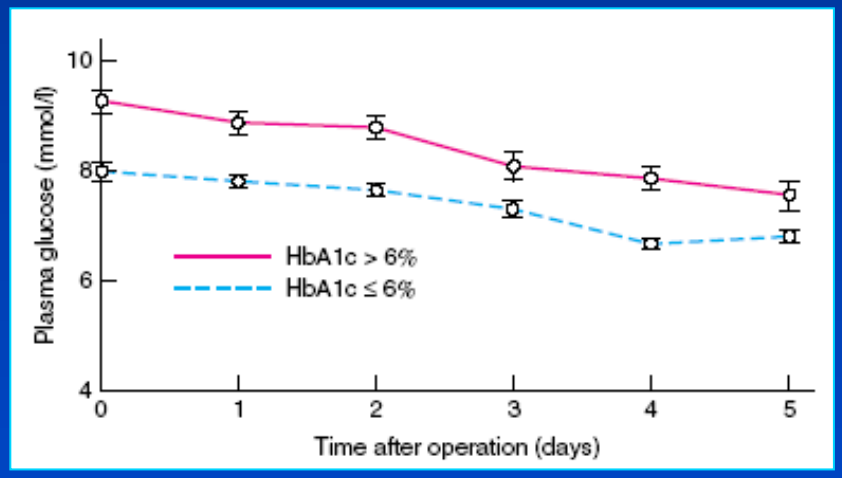
It has been well established that diabetic patients are more prone to nosocomial and surgical site infections (SSI).

Shah BR. et al. Diabetes Care. 2003;26(2):510-513.

Abdominal Surgery and HbA1c

Good long-term glycemic control (HbA1c < 7%) is strongly associated with significantly fewer post-operative infections in GS.

Dronge AS. et al. Arch Surg. 2006;141:375-380



Patients with HbA1c > 6% had higher post-operative glucose ($p < 0{\cdot}001$) than patients with a normal HbA1c level (<6%) in CRS.

Gustafsson et al. British Journal of Surgery 2009; **96**: 1358–1364

Hyperglycemia and Abdominal Surgery

Post-operative hyperglycemia is also associated with increased morbidity and mortality rates in non-diabetic patients.

Swenne CL et al. J Hosp Infect. 2005;61(3):201-212.

Post-operative glucose level is the most important risk factor for SSI in GS.

Ata A. et al. Am Surg 2010;76(7):697-702.

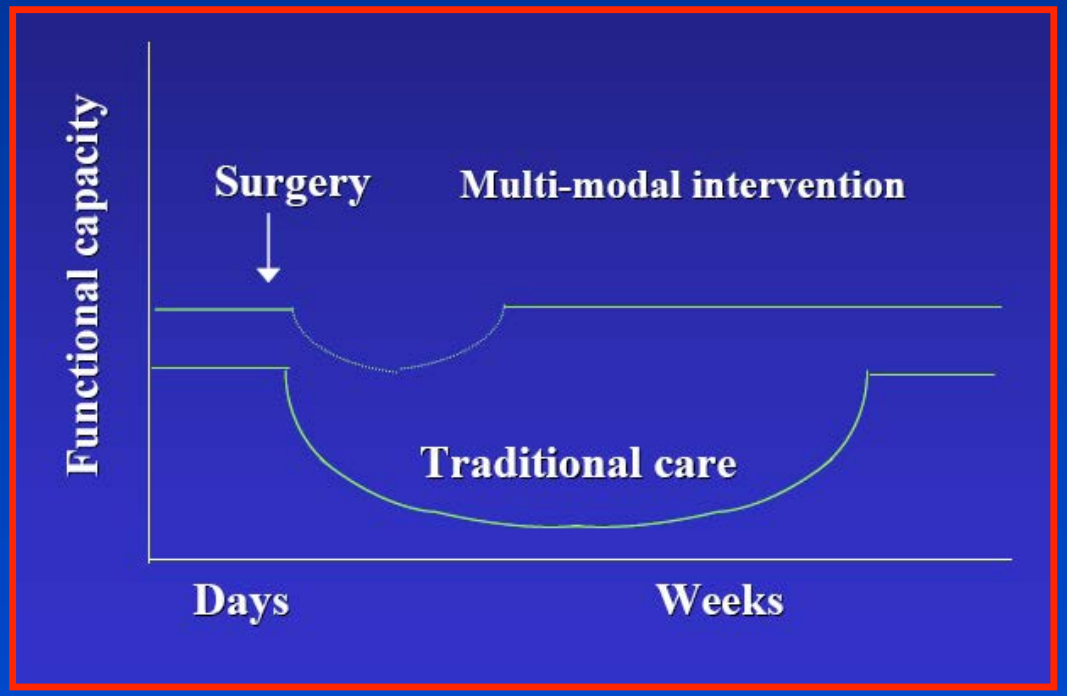
In colorectal surgery post-operative serum glucose level > 140 mg/dL is the only significant predictor of SSI (20.6% vs 7.6%).

Ata A. et al. Am Surg 2010;76(7):697-702.

Fast-Track program: definition

Multimodal enhanced recovery program, proposed by H. Kehlet, for patient underwent colorectal surgery.

Kehlet H. Br J Surg 1999; 86(2):227–230.



Fast-Track program

Pre-operative

-Information

-No mechanical bowel preparation

-No pre-anesthetic medication

-No pre-operative fasting

-CHO

Intra-operative

-Minimally invasive surgery

-Normothermia

-Multimodal Analgesia (CPD-no morphine)

-Remifentanil

-Prevention PONV

-Goal-directed fluid therapy

-Iperoxigenation

Post-operative

-No abdominal drainage

- No bladder catheter and no NG intubation

-Early Mobilization (d0)

-Prophylaxis against thromboembolism

-Use of laxative

-Early Enteral feeding (d0)

-Early discharge (d2-d3 after surgery)

- Target glicemico: 140-180 mg/dl anche in ICU chirurgiche; <140 preprandiale e <180 postprandiale nel paziente non critico
- Terapia insulinica ev nel peri-postoperatorio
- L'insulina è la terapia di scelta (outcomes migliori con *basal bolus*)
- Sospensione metformina: 2 giorni prima e fino a 1 giorno dopo l'intervento chirurgico e in caso di impiego di mdc iodato
- Evitare TDZ (espansione volemica)
- L'alterazione dello stato di coscienza dovuto alla anestesia può mascherare i sintomi dell'ipoglicemia

Standards of Medical Care in Diabetes—2014

American Diabetes Association

- **in area critica (ICU) il paziente chirurgico potrebbe beneficiare della terapia Insulinica intensiva**

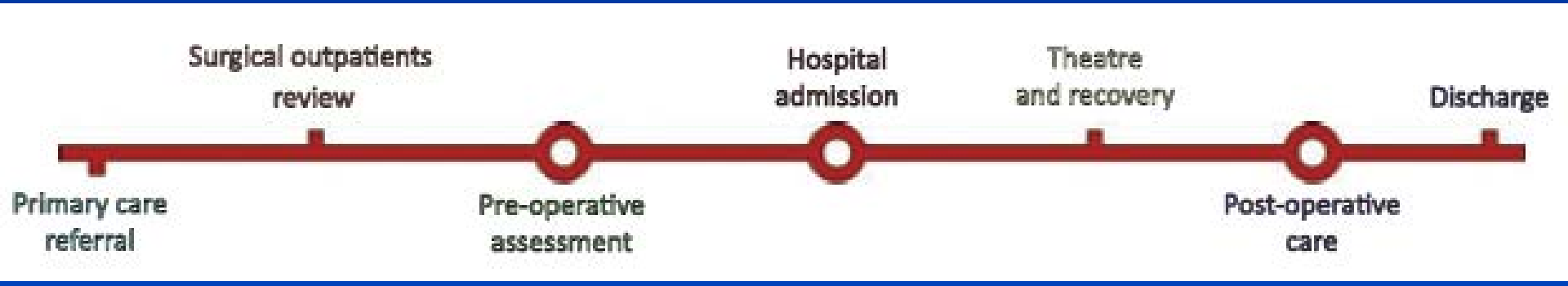
- **Il coinvolgimento del team diabetologico è associato a riduzione della durata della degenza e a esiti migliori**

Non sono rilasciate specifiche indicazioni per l'area chirurgica

Diabetes Care Volume 37, Supplement 1, January 2014

NHS Diabetes guideline for the perioperative management of the adult patient with diabetes

Pathway of care for elective surgery



A careful planning is required at all stages of the patients pathway from general practitioner referral to post-operative discharge

Diabet. Med. 29, 420–433 (2012)

NHS Diabetes guideline for the perioperative management of the adult patient with diabetes

Key points

- The patient should be involved in the planning
- Diabetic patients should be prioritized on the operating list
- High risk patients should be identified in surgical outpatients or at pre-operative assessment to manage their risks

KEY RECOMMENDATIONS

1) Modification to usual diabetes treatment if the fasting is minimized (routine use of iv insulin infusion is not recommended)

2) Promote earlier mobilization, with resumption of normal diet and return to usual diabetes management (ERPP)

- Capillary BG levels should be monitored hourly in the immediate post-operative period
- The target BG levels should be 110-180 mg/dl

Diabet. Med. 29, 420–433 (2012)

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Pertinent elements of the Enhanced Recovery Partnership Programme

- Optimize preoperative health, commencing in primary care
- Anaesthetic preoperative assessment with medical optimization, risk stratification and discharge planning
- Admission on the day of surgery with prior patient engagement and appropriate medication adjustment
- Minimal perioperative physiological trespass
- Early post-operative nutrition and return to normal medicines
- Discharge once predetermined criteria met and patient in agreement

Diabet. Med. 29, 420–433 (2012)

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Key points

- The patient should be involved in the planning
- Diabetic patients should be prioritized on the operating list
- High risk patients should be identified in surgical outpatients or at pre-operative assessment to manage

- Iv / sc insulin schedule should replace sliding scale regimen
- **When short starvation period (one meal missed) is planned the patients should be managed by modification of their usual diabetes medication avoiding iv insulin infusion wherever possible**
- **Patients expected to miss more than one meal should have iv insulin infusion**
- The recommended solution for patients requiring iv insulin infusion: 0.45% saline+5% glucose+0.15% (0.30%)KCL
- The recommended solution for patients not requiring iv insulin infusion: 0.9% saline
- Capillary BG levels should be monitored hourly in the immediate post-operative period
- The target BG levels should be 110-180 mg/dl

Diabet. Med. 29, 420–433 (2012)

NHS Diabetes guideline for the perioperative management of the adult patient with diabetes

Post-operative care

Action plan

1. Staff skilled in diabetes management should supervise surgical wards routinely
2. Allow patients to self manage diabetes as soon as possible, where appropriate
3. Provide written guidelines for the use of iv fluids and insulin
4. Aim for BG levels in 110-180 mg/dl range where this can be achieved safely
5. Monitor electrolytes and fluid balance daily
6. Treat post-operative nausea and vomiting to promote normal feeding
7. Maintain meticulous infection control
8. Inspect foot and pressure areas regularly

Diabet. Med. 29, 420–433 (2012)

NHS Diabetes guideline for the perioperative management of the adult patient with diabetes

Safe use of insulin

1. Errors in insulin prescribing are very common

2. Insulin in one of the top five high-risk medications in the in-patients environment

3. 1/3 of all inpatients medical errors leading to death within 48 h of the error involve insulin administration

Diabet. Med. 29, 420–433 (2012)

NHS Diabetes guideline for the perioperative management of the adult patient with diabetes

iv insulin infusion delivered indipendently of glucose: advantages

1. Accurate delivery of insulin via syringe driver
2. Tight BG control in the intra-perioperative starvation period
3. Flexibility for independent adjustement of fluid and insulin

Diabet. Med. 29, 420–433 (2012)

NHS Diabetes guideline for the perioperative management of the adult patient with diabetes

iv insulin infusion delivered indipendently of glucose: potential complications

1.Delayed introduction of iv insulin infusion
2.Administration of insulin without electronic infusion control device
3. Incorrect setting of pumps and syringe drivers
4. Failure to monitor BG regularly
5. Ketoacidosis resulting from insulin omission in fasting patients (DMT1)
6. Severe hypoglycaemia, if glucose or NE are discontinued but insulin is continued
7. Hyponatraemia
8. Use of wrong insulin protocol
9, Delays and errors in transferring back to the patient's normal regimen from insulin infusion (prolong lenght of stay)

Diabet. Med. 29, 420–433 (2012)

NHS Diabetes guideline for the perioperative management of the adult patient with diabetes

Because of these issues , many are now successfully managing peri-operative glucose control in the elective surgery by manipulating the patient's usual medication

Factors favouring perioperative diabetes control by modification of usual glucose-lowering medications

- Good diabetes control prior to admission (HbA_{1c} < 69 mmol/mol, 8.5%)
- High probability that the patient will be capable of self managing their diabetes during the immediate post-operative period
- Short starvation period (only one missed meal)
- Surgery/procedure can be carried out early on a morning or afternoon list

Diabet. Med. 29, 420–433 (2012)

Guideline for perioperative adjustment of non-insulin medication (short starvation period—no more than one missed meal)

Tablets	Day prior to admission	Day of surgery	
		Patient for morning surgery	Patient for afternoon surgery
Acarbose	Take as normal	Omit morning dose if 'nil by mouth'	Give morning dose if eating
Meglitinide (repaglinide or nateglinide)	Take as normal	Omit morning dose if 'nil by mouth'	Give morning dose if eating
Metformin (procedure not requiring use of contrast media*)	Take as normal	Take as normal	Take as normal
Sulphonylurea (e.g. Glibenclamide, Gliclazide, Glipizide, Glimeperide.)	Take as normal	Once daily morning omit Twice daily omit morning	Once daily morning omit Twice daily omit morning and afternoon
Pioglitazone	Take as normal	Take as normal	Take as normal
DPP-IV inhibitor (e.g. Sitagliptin, Vildagliptin, Saxagliptin)	Take as normal	Omit on day of surgery	Omit on day of surgery
GLP-1 analogue (e.g. Exenatide, Liraglutide)	Take as normal	Omit on day of surgery	Omit on day of surgery

*If contrast medium is to be used and eGFR less than 50 ml min^{-1} 1.73 m^{-2}, metformin should be omitted on the day of the procedure and for the following 48 h.

DPP-IV, dipeptidyl peptidase 4; GLP-1, glucagon-like peptide 1.

Guideline for perioperative adjustment of insulin (short starvation period—no more than one missed meal)

Insulins	Day prior to admission	Day of surgery	
		Patient for morning surgery	Patient for afternoon surgery
Once daily (evening) (e.g. Lantus® or Levemir®. Insulatard® Humulin I®) Insuman®)	No dose change*	Check blood glucose on admission	Check blood glucose on admission
Once daily (morning) (Lantus® or Levemir® Insulatard® Humulin I®) Insuman®)	No dose change	No dose change*. Check blood glucose on admission	No dose change*. Check blood glucose on admission
Twice daily (e.g. Novomix 30®,Humulin M3® Humalog Mix 25®, Humalog Mix 50®, Insuman® Comb 25, Insuman® Comb 50 twice daily Levemir® or Lantus®)	No dose change	Halve the usual morning dose. Check blood glucose on admission. Leave the evening meal dose unchanged	Halve the usual morning dose. Check blood glucose on admission. Leave the evening meal dose unchanged
Twice daily—separate injections of short-acting (e.g. animal neutral, Novorapid® Humulin S®) Apidra® and intermediate acting (e.g. animal isophane Insulatard® HumulinI® Insuman®)	No dose change	Calculate the total dose of both morning insulins and give half the total dose as intermediate acting only in the morning. Do not give any short-acting insulin in the morning. Check blood glucose on admission. Leave the evening meal dose un changed	Calculate the total dose of both morning insulins and give half the total dose as intermediate acting only in the morning. Do not give any short-acting insulin in the morning. Check blood glucose on admission. Leave the evening meal dose unchanged
Three, 4 or 5 injections daily	No dose change	Basal bolus regimens: omit the morning and lunchtime short-acting insulins. Keep the basal unchanged*. Premixed morning insulin: halve the morning dose and omit lunchtime dose. Check blood glucose on admission	Take usual morning insulin dose(s). Omit lunchtime dose. Check blood glucose on admission

*Some units would advocate reduction of usual dose of long-acting analogue by one third. This reduction should be considered for any patient who 'grazes' during the day (see Controversial areas).

Warn the patient that their blood glucose control may be erratic for a few days after the procedure.

AZIENDA OSPEDALIERA

S. CROCE E CARLE - CUNEO

PDTA

DIABETE in CHIRURGIA

(paziente adulto – chirurgia in elezione)

Elaborazione a cura del Gruppo di lavoro Aziendale "Diabete in Chirurgia"

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GRAZIE E ARRIVEDERCI