(關)(於) ADRENOCORTICAL HORMONES THERAPY (的)(障)(害)

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自從屬於 Adrenocortical hormone 的 Cortisone 類問世以來已經將近10年的時光，此間衆人均熟知該類藥物如使用於適應症時會以驚人的效果呈現救命的作用，然而如連用數天或是數星期以上時會呈現引起種種障害的可能性，並其中有些是會致命的。鑑於臨床上 Adrenocortical hormones （以下簡稱 ACH）應用的機會日增，吾人需要瞭解目前所發現的各種障害的現象，並且以充分的注意使用而儘量避免引起不良的後果。

Ⅰ、感染病的發生，結核病巢的惡化

ACH 具有抗炎作用因此被應用於種種炎症症狀的治療，反面會減弱生體的防禦力而誘發感染症的發生乃至惡化，尤其使用於非活動性結核病人會使其引起粟粒結核，或是發生由化膿症引起的敗血症，肺炎，眞菌症而致死。因此當使用時，需要事先詳問其結核的既往歷，同時照 X-ray 檢查有否結核病巢。若是病人既患結核但是爲了白血病或是膠原病等症非投與ACH 不可時絕對必須併用抗結核劑。又檢查蓄膿症，扁桃炎等的存在，如存在時也須併用對個個有效的抗生物質。

總之ACH 投與期間中時常留意感染症的發生，即致意早期發現，屆時即時開始投與抗生物質而採取適當的預防對策。

因 ACH 對 Virus 性疾病亦具有抗炎症作用，所以對腦脊髓炎，帶狀疱疹也會呈現效果，然而投與於水痘時，因會使其傳遍於全身的結果小兒往往會死亡。

Ⅱ、胃、十二指腸潰瘍的出血、穿孔

ACH 投與於患有胃、十二指腸潰瘍的病人時往往會引起出血、穿孔，其機構被認爲一者由其會使胃酸分泌亢進，另一者由其會使胃、十二指腸粘膜的抵抗力低下。因此當投與時必須事先詳問胃、十二指腸潰瘍的既往歷，如有既往歷存在時，儘量不使用爲上策，若是萬不得已使用時須在嚴密的監視下使用，同時應併用 alumigel hydroxide 等中和劑與自主神經遮斷劑。如上腹部呈疼痛時須立刻作胃、十二指腸的 X-ray 檢查。又向來沒有既往歷的病人在投藥期間中呈惡心或是上腹部疼痛等症狀時須加充分注意，因本劑本有抗炎症作用，即使由穿孔引起腹膜炎時往往不呈劇痛、發熱、腹壁緊張等典型的症狀，所以應特別留意這一點。如本劑投與期間中發見有發熱，明顯的鼓腸時應注意研究其有穿孔的可能性的存在。

Ⅲ、由於下垂體副腎皮質機能不全的Shock

經本劑長期間（大約1個月以上）投與，由於 ACTH 的分泌受抑制的結果，副腎皮質常會變成萎縮狀態，有時下垂體的 ACTH 分泌能會低下，在該情況下如果加上 Stress 時，在本劑大量投與生體是不受什麼影響，若是急激減爲小量，或是中止投與時，因病人本身的副腎不能順應 Stress 而分泌 hydrocortisone ，病人就陷入 Shock 狀態。不過經 ACH 的長期投與，下垂體副腎皮質系的機能不一定會低下，因此於個個病例判定其機能不全的存否是屬於難事，但是吾人對所有的 Case 總要考慮其可能性的存在。

針對該 Case 的對策如下

(1)如欲中止ACH的投與必須以緩慢的減量。

(2)下垂體的 ACTH 的分泌是從半夜至早晨爲最多，嗣後會漸漸減少，至夜晚達到最低，因此除去從半夜的增加分泌的抑制爲目的，可能的話先中止夜間的投與份量，第二段就中止日間的投與份量，最後才中止早晨的投與份量。

(3)中止投與ACH的前後數天連續注射ACTH而企圖促進副腎皮質機能的回復。

但是以這些方法是還不完全的，就是對長期投與過ACH 的病人，在中止後半年乃至1年間須考慮到其下垂體副腎皮質系機能低下的可能性，若要施行全身麻醉的場合，或是呈發熱，下痢，嘔吐等症狀時需要充分的注意，即須準備 ACH，視其需要性以一時性的經口投與或是注射。

Ⅳ、重篤的精神障害

具有精神病素因者因經本劑的投與，往往會發病，因此要使用於具有精神病素因者時須充分的注意。

Ⅴ、糖尿病的發生

本劑使用於糖尿病患者，會使糖尿病惡化，而增加 insulin 的需要量，因此投與本劑前必須問診有否糖尿病，同時檢查尿糖，雖非糖尿病患者，經投與本劑後往往會發生糖尿病。最近被認爲具有糖尿病遺傳素質的人，經使用本劑就有可能引起糖尿病。由於本劑所引起的糖尿病（Steroid diabetes mellitus）以 insulin 是可以治癒的，而且中止 steroid劑就大體會消失，所以生命的危險是幾乎沒有的。不過在本劑投與期間中因不注意糖尿病的發生，而使病人陷入糖尿病性昏睡致死的報告例亦有。因此本劑投與期間中一星期中最少1次檢查其尿糖較爲妥善的。又本劑會低下腎臟排泄糖的閾值，所以即使糖尿出現也不得輕易地斷爲糖尿病，應該

臺灣省醫學會醫師公約

第一章：我願意貢獻我的一生爲救人濟世服務。

第二章：我願意尊敬和感謝我的老師。

第三章：我願意盡我一切的力量尊重人命，妥善加以維護，並以獨立、自由良知與尊嚴之態度執行我的救人聖職。

第四章：我願意時常爲追求醫學之進步與社會常識之素養而努力，使我的學識不陷於偏僻之弊。

第五章：我願意最優先考慮病人之利益，不允許任何對病人不利的事情干與我的職務。

第六章：我願意不違背病人之信託，不洩露病人之秘密。

第七章：我願意不收任何在醫療上不應得之報酬，不接受任何以營利目的之職務。

第八章：我願意不做不能勝任之醫療行爲，不爭奪病人就醫，不避忌共同會診，使病人有選擇醫師之自由權。

第九章：我願意對同仁有禮貌，互敬互信，協力維護醫師之社會地位。

第十章：我願意服從公會之指導，遵守醫師公約，履行會員應盡的一切義務。

經檢查血糖值，或是糖同化能後才可以判定其糖尿病的存否。

Ⅵ、骨粗鬆症

因 ACH 具有蛋白異化促進作用，經長期使用後會引起骨粗鬆症，即容易骨折。該副作用於 rheumatic arthritis 的患者尤其容易發生。

所以長期投與本劑時應時常照骨的 X-ray 而注意該症的發生。

又爲了預防該症發生的目的併用蛋白同化 Steroid劑是有效的。

Ⅶ、肌萎縮或是肌力低下

該症是ACH 投與期間中有時會發生的副作用，而有時是從開始使用3個星期左右就發生，有時是投與1年以上後才發生的。最初會感覺到的症狀是攀登階段會感覺困難，其次是從蹲的位置站不起來，更嚴重的是從椅子亦站不起來，且不能走路。大腿、肩膀、上腕等靠近軀幹的肌肉是被侵犯較多的部位。其原因目前雖都歸於ACH 的蛋白異化促進作用，不過還剩下許多的疑問。肌萎縮是在許多ACH中使用 Triamcinolone 時特異的會發生的。此時改用別種的 ACH 如 Prednisolone 或是 Dexamethasone就會回復。關於 Triamcinolone 引起肌萎縮的原因究竟是否由於 Triamcinolone 本身的特異作用或者是否因 Triamcinolone 元來具有低下食慾的作用，引致蛋白與維他命的攝取量減少的結果才特別引起的，目前還不明白。

Ⅷ、小兒的成長抑制

如前述ACH 是具有蛋白質異化作用，所以經長期投與發育期的小兒，會抑制小兒的成長是不待論的，因此，對發育期的小兒的投與必須注意。

Ⅸ、浮腫、高血壓、低鉀血症的出現

Cortisone 或是 Hydrocortisone 具有貯留 Na^+ 同時促進排泄 K^+ 的作用，引致常常發現 Cortisone 等使用後出現浮腫、血壓上昇，低鉀血症等症的副作用。不過經鹽類作用較少的 Prednisolone 以及其後的合成 ACH 問世後其副作用就幾乎不出現了。

Ⅹ、胃部膨滿感，胃部疼痛

這是比較常發現的副作用。所以投與ACH 時併用如 Alumigel hydroxide 等中和劑爲妥。若是副作用出現時隨時改換他種的ACH 就會消失，假使經改換藥劑後，其副作用仍然繼續存在就是表示：胃、十二指腸已瀕臨於發生潰瘍的危險，此時須即時併用自主神經遮斷劑，同時努力儘量減量乃至中止投藥。

Ⅺ、睡眠障害，多幸症的出現

這也是比較常發現的副作用。只有Triamcinolone 一種不太會引起障害，因此如果因使用他種的ACH而引起副作用時，隨時改用 Triamcinolone就會消失。又對睡眠障害的對策中，中止夜間的服藥亦是一法。

Ⅻ、Cushing's symptoms 樣外觀

經大量的 ACH長期投與後病人會呈與Cushing's symptoms 同樣的外觀，即滿月樣顏貌，軀幹尤其背中央上部發生脂肪的沈着 （Buffalo-hump 水牛型隆肉），或是腹部、大腿部的紅紫色線條等現象。

這現象是使用任何一種現在所有的合成 ACH，均會引起的。

不過中止投與後症狀就會漸漸消失。由此觀之其症狀本身是不成問題的，主要的問題是生體呈這些外觀時，生體對感染症的抵抗力，乃至下垂體副腎皮質系機能等均已低下，同時發生糖尿病，或是骨粗鬆症的可能性較多，爲了這個問題的存在，吾人應更加注意。

（作者：本校藥理學教授）

TOOTH BRUSH, TOOTH PASTE AND DIET

Introduccd by Prof. C. H. Chang

"Good brushing habits and a good-tasting, tooth-paste go together ! "

Regular brushing after meals is important to good oral health. However, as you know from experience, it takes a good-tasting toothpaste to encourage good brushing habits especially among children.

We at the good dental toois continue to stress the importance of brushing after meals in our advertising because we reccgnize it as an integral part of a good oral health program.

Namely :

(1) Brushing Regularly After Meals
(2) Twice yearly Visits to Dentist
(3) Proper Diet

Diet serves a two-fold purpose. Firstly, it serves as the source from which the tissues of the body are chiefly manifested as growth, but in the adult it serves for the replacement of wear and tear, but the amount required is very small. Secondly, Diet supplies the energy required for the activities of life.

Only Diet that is absorbed, and which can undergo oxidation in the cell, is of value as a sourse of energy. Diet is composed of substances which belong to one of three classcs of chemical compounds. namely : Proteins, carbohydrates, and Fats, of which the proteins alone contain Nitrogen. In addition, diet contains a variable quantity of water, inorganic salts, and the so-called "accessory factors" or Vitamins.

Proteins.— The physical properties of proteins show them to be more or less soluble in Water with the formation of a colloidal solution. They are precipitated from such a solution by addition of certain inorganic salts, in an unchanged condition. On the other hand, application of heat coagulates them, producing an alteration of structure. The different proteins coagulate at different temperatures.

Chemically the proteins are substances of extremely complex constitution, and they contain the elements C, H, O, and N. In Some proteins the element S is found in addition. The ultimate products of protein hydrolysis are the amino acids, which exist in great variety.

Physiologically protein is used for the building of tissues, and also as a source of energy. Protein cannot be stored in the body except as new tissues. The nitrogenous part of the protein is of no value as a source of energy, hence the nitrogen of protein taken in excess of that required for growth and repair is eliminated as the waste product urea. The other constituents of the protein are utilized for energy purposes. The taking of protein diet caused a greater increase in the total metabolism than the taking of an equivalent amount of carbohydrate or fat, the extra energy appearing as heat. This is spoken of as the Specific dynamic energy of proteins. protein should therefore be supplied liberally to a sedentary worker during the cold weather.

Carbohydrates. — The more complex of these compounds are amorphous, and form translucent colloidal solutions, where as the Simple Carbohydrates are generally crystalline, and soluble in water, giving clear solutions.

Chemically they are compounds containing Carbon, Hydrogen, and oxygen, the two latter elements being united in the same proportions as occur in water. Starch, Glycogen, and Dextrin are examples of the complex polysaccharides, and Cane Sugar, Maltose, and Lactose are the Disaccharides made use of by the tissues

after their conversion into the simpler Hexoses, Glucose, Fructose and Galactose, by the process of digestion.

Physiologically they cannot serve as tissue—builders since they do not contain nitrogen, but they form the chief and most readily available source of energy. They are demanded in prolonged muscular exertion.

Fats. — The three most common fats found in the animal kingdom are the substances known as Stearin, Palmitin, and Olein, of which the first two are solid and the third fluid at the body temperature.

Physically they are either colourless or have a yellowish tinge, odourless, and tasteless when pure. They are insoluble in water. but soluble in the hydrocabon solvents and other organic liquids.

Chemically they are compounds of glycerol and fatty acids and are fonmed by the elemination of three molecules of water from a molecule of glycerol and three molecules of a fatty acid. If the fatty acid molecules are alike, the fat is termed homo—acid, if different, hetero—acid. Hydrolysis of a fat resolves it into its Constituents glycerol and fatty acid. If the hydrolysis is performed with alcoholic potash, glycerol and a soft soap is formed. This reaction is spoken of as Saponification.

Physiologically fats can not serve as tissue—builders alone, but they are a very concentrated form of energy giving diet. It is possibly a necessity for the maintenance of an efficient cell metabolism.

Salt and Water. — These again cannot furnish energy nor serve as tissue—builders. but are essential in the physico—chemical processes which accompany cell activity.

Accessory Factors.—These again cannot furnish energy nor build tissues, but their presence in diet is essential to growth and the maintenance of health. Three of these are well known, as follows :

(1) Fat—soluble A accessory factor. This is a growth accessory factor, and is absolutely necessary.

(2) Water—soluble B accessory factor. also known as the antineuritic vitamin.

(3) Water—soluble C accessory factor, or the antiscorbutic vitamin. E, T, C.

Many years ago a student in the Harvard Dental college wrote the foll—owing interesting facts in a thesis on the influence of diet on the development of the teeth : My sister, one brother and I were all born and brought up in Inedia, untill I was eight years old, I being the youngest of the three. The diet there was wholesome. and before our births my mother had this same kind of diet.

When I was eight years of age the family moved to Canada, where my youngest brother was born and brought up for six years. The diet there was less wholesome and more fancy and sweet. My mother was always particular about the cleanliness of our teeth and mouth. Later my family returned to India, butealas ! the damage was done. My little brother suffered from extensive decay and dental ailments, while the other three of us are free from any dental sufferings." This instance seems to indicate that diet plays an important part in preventive dentistry.