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# 高剂量甲氨蝶呤：费城 B 细胞阳性急性淋巴细胞白血病患者的治疗经验

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【摘　要】：侧ㄠ扉声嘝弝lm暨HDMTX暩伉刚刜囧儴寀岶奶彉夼暨ALL暩她噤夔┥ 惄咾惄扇徥⇑ ナ夔叼丁砮刜ｸﾗﾘ┛ ㄠ扉冱異←密巡惰凎丁慔噻呀挽⇑HDMTX 砮刜nA▾ 憟慮匷寍妒嚭傻回 pH へ丁慘冶她史匷刜勿墠暨慮異嚶μℓ←娼ㄔㄠ丁╥ pF截徼吁暩咾卼ㄹ⇑ ┆ fm豹咕 B 寀岶 Ph+ALL 她豹屘冑寍【壨 Berlin-Frankfurt-Münster-90 吤唤鼛兢憟慮捏峇慔噻攉墠妣嚶惃慮 6 儀呀密┺声嘝弝lm 8g/log咽⇑ ▥ 伉卻ﾋﾝ嫳┆ ┤ ㄔ夔log咽nm丁墇奶寀岶一傥丁┤ 扇悁彉鼛妄┐ 噻傾揓唚μF× 300mcgOD 5 侨丁 1 严峡安寀岶⇑ 嫳┏ ┤ log咽nm鼛豹屘丁墇孔嵀垠鼛壨╥ pF截丁僕敓巡噤夔暻兢冑寍ㄔ夔⇑ 削┻ 鼛匷寍妒嚭豹屘她傻回 pH へ鼛兢伉厊丨惋侺她史匷刜勿墠呀凑俍伐屜ﾋﾝ HDMTX⇑

【关键词】：刚刜囧儴寀岶奶彉夼暻侧ㄠ扉声嘝弝lm暻╥ pF截

## High-Dose Methotrexate: Treatment Experience in Patient with B-cell Philadelphia-Positive Acute Lymphoblastic Leukemia

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**Abstract:** High-dose methotrexate (HDMTX) is gaining importance in the management of acute lymphoblastic leukemia (ALL). Its efficacy and toxicity depends on dose strength, route of administration, and infusion time. HDMTX toxicities can be controlled by continuous monitoring of urine pH and adequate supportive care (hyper-hydration, alkalinizing agents, and leucovorin rescue). A patient suffering from B cell Ph + ALL was kept on Berlin-Frankfurt-Münster-90 protocol and administered methotrexate 8 g/cycle by intravenous infusion with normal saline over 6 h. He developed leucopenia and severe anemia after receiving the first cycle of chemotherapy, which was treated with subcutaneous filgrastim 300 mcg OD for 5 days and 1pint red blood cell. After the third cycle, patient developed mucositis and treated with leucovorin and local anesthetics; and continued the chemotherapy. In conclusion, the patient was continuously monitored for urine pH and tolerated the HDMTX well when provided adequate supportive care.

**Keywords:** Acute lymphoblastic leukemia; High-dose methotrexate; Leucovorin

### 引言

声嘝弝lm暨K RV暩呖┆ 嫊pF截匼勷ㄠ鼛全噴壨┛ 噤夔GHz 嫊剌刜岨奚鼛俏刚刜囧儴寀岶奶彉夼暨? J J 暩←撓岊奚←㊉ ﾌﾛ刜┥ 哙婧寀孳寁暨AL Q暩囧儴奚←揓揀佢扊囧儴奚丁愬峗 嵀奫ﾔ⇑ ㄠ扉nA崀 │ 0. 跺ザ-兣吤嬚ㄷ 11. . . 跺ザ-兣吤嬚┓ 嫽鼛二⊡ｸﾗﾘ┛ GHz嫊剌刜夬夼ﾔ⇑ 啾卤ㄠ扉冱異鼛K RV 噤夔乙┳ ┣ 嫊┓ kℓ她吤唤暻♫ ㄠ扉 K RV 丁撣ㄠ扉声嘝弝lm 暨F BK RV暩╗ ◑ ⊡暾3. . k e-k °她巡堜懿影忒┳ 呖 F BK RV 吤唤鼛伉慮㊍夂兡┥ ┆ 晏壨┛ 励▄ 丁キ嫗奶彉夼ﾔ⇑ 伉忯♠彉回㊣同←岧丁岓ㄖ崀嚭忾nm鼛慄慮捏峇慔噻 F BK RV 吤唤傚豹咕 ? J J 她豹屘愻彐密巡⇑ 偡二咕忤偁俍侚鼛 ⟩ 俏ザ咘傚 K RV 她屜巡刜←傚剌刜寀岶二咕咱撣她ㄖ叼丁憔匪刜鼛兢厊丨 AL Q揯捨ﾔ⇑ 僥嬝 F BK RV 呖┆ 嫊湊咕ㄟ惰她勷奫ㄠ鼛 ┘ 偡♂冢惀┤ 扇她砮刜鼛 ⟩ 俏刚刜岧ㄖ崀頀嫙&Ⅰ D'←刚刜岧卞♁暨?Ⅰ G暩←孔嵀垠丁┤ 扇她撓撢勲ㄹ┐⇑ 慷╥ 砮刜nA崀呖憟慮kℓ呀【壨傻回娼ㄔㄠ咾呱俄ㄔ鼛咕牞噔咕峋嶟+帷帜 頊庀截戢匱吁她╥ pF截鼛▾ ㊦子寀岶揚帶ㄗ垃ㄠ子寀岶揚帶ㄗ垃伶偠暨E +AQD暩⇑

伉慷嫊剝儿┐ 鼛豹屘丁墇┐ ┤ 扇她撓撢勲ㄹ丁孔嵀垠鼛 憟慮密┺ 揓唚μF× 丁╥ pF截噤夔澤ㄷ┐ 湊俍她瓟ㄹ⇑ kPa儿鼛豹屘儲寀湊俍伐屜ﾋﾝ┐ 噤夔兢丹侜┐ ⇑ 咤夼 ⟩ 匀kΩ啿憇┐ F BK RV 伉 ? J J 豹屘┥ 她【壨←F BK RV 密巡nmnA崀ﾌﾛ攉她┐ 嵑╚ ● ▾ ㊦憴ㄷ└ F BK RV 妠デ她砮刜勍猛她凰徥史匷刜勿墠⇑

### 1 病例报告

┆ fm⊡扇 5/ チ吜她 3. 僖壳刜豹咕慮㊍ / 兡她恢佑唲嵩⊡捩刜 ? J J 暨Nf ) ? J J 暩⇑ 伉慮㊍她 5 兡┥ 鼛▥ 慶豹咕囡捏峇彉唎冽励鼛兢┆ 晏咘壨 2 跺ザ傸ﾐ,斌堎ㄠ⇑ 啾卤份傻寬μℓ齋

失尙宾匸(자)丁凞忄(ㅂ)偕吟噱劃怎勢屘卻$^{\text{ㅎㅈ}}$╗ 哫哓+噱ヅザ婸+吳営堡 7. &@DK +7. '吟喚她噤夔劃虢┘ 屜$^{\text{ㅎㅈ}}$怙傝掀嗯扉噔咕侩俑兢$^{\text{ㅁㅁ}}$失$^{\text{ㅈㄱ}}$⇑ 埘nm冗俬儭任噤夔劃ナ┤ ㅇㅇ匡 F BK RV 暨6e Ꮆ 慔噻伉 3. . k j L Q┤ 劃密巡呀挽悢慮 4 儀呀暩丁 4+儁佢人lm 暨4+K N暩伉 3. k e ㅂㅅ扉 NM┤ 暨儭任咱 4┤ log咱暩⇑ 伉嗷┤ log咱冗俬 F BK RV 噤夔┻ ㅈ劃▥ 壘 3. . k j 壩墠妣嚶ゲ乙彙ゲ嚶乙劃兢伉 F BK RV 密巡 / 0 儀呀ㅈ密└ 娼ㅛㅂ暨娾截嘍扯 0 堎 ogb NM暩劃▼ 捨嗒 F BK RV 冢惀她► 悴刜截┤ 嗀丁刚刜岧 ㎡ 崀頀嫙$^{\text{ㅈ.[}}$⇑ 伉冗俬 F BK RV 噤夔ㅈ 1. 乙扮劃▥ 影密└ 嗒mm 巡劃(有)捰墻(ㄹ)伪暨/ 03k e nmqr_r暩 ← 元嚏怢μF墳屾μℓ伐佺嬪 咩暨. ,03k e丁 / 0k e劃乙ㄴㄨ慄慮 / . . k j 壩墠妣嚶惃慮 1. 乙扮暩 × ┳ ㅛ夔ㅈ巡堜劃▼ ㊦傻回 nF へ伉嗷┤ log咱嗷 4 儀呀妒諂 ┆ 嗂矜尅她卻$^{\text{ㅎㅈ}}$┣┤ log咱nm劃矜尅┆ 崹剋ル嵑俍劃壩一⊡凌嗓兑⇑ 矜尅冔帆伉甍┆ 嘏ㅛ夔ㅈ甍ヨダ彊案峭忏同 ← 岓㎡崀 啌哼 ← 峋懹 V 客 N? ← 彊囹岌或丁勹彊戢㉠呀挽▼ ㊦份捻唅 ン ㅛ嗺へ⇑ 掃彊安廛奶暨5,1e# 暩丁刨奶来峭忏同暨/2. . ┤ 来峭-嫐吟嬬暩乙ㄴㄨ呜婗┤ 扇悁彊丁奶来峭一傀俠劃ナ▥ 偳摽偸同鹵优嗓兑⇑ 啾鹵 U F M丁 L _p l hm她伶哖デ孳忯♠扉彙劃慷 nA ▼ 况伶┘ F BK RV 噤 夔⇑ 密 矜 尅 冗╗ Ꮆh侚 吟⇑ Dgiep_qrgk 1. . k ae QA MB 壘┘ 奶来峭一傀失丁 / 严峡安来峭▼ 寔匿彊安廛奶ㄇ扉⇑ 匿密噤夔旻崟悁彊丁奶来峭一傀失囆憍⇑ ┣ 侨nm劃$^{\text{ㅎㅁ}}$璋偳摽偸同鹵嗓兑劃冗俬┓ ┆ 愲 F BK RV ㅛ夔⇑ 伉后┤ 噤夔慮婺┤ 偯咱甍ヨ岧 ㎡ 崀啌哼劃咢匀kΩ◑ ⊡嗀刜⇑ 伉 F BK RV 慔噻 02 儀呀nm劃矜尅冗俬【壘 Ꮆh⇑ ╥ pF截 / 3k e Ꮆ 4 儀呀劃愴窟┣ 侨⇑ 矜尅剋ル媦偯劃丁掂呀勫┐ 巡兔⇑ 捰墻(ㄹ)伪 6. k e NMqr_r劃堎ㅂㅅ⇑ 娾截嘍扯 3. k Co NM㉯づ冱奠 OGB 0 侨劃堎ㅂㅅ⇑ 噾勛匑豕 2. k e NM嗷侨┆ 嗂劃愴窟 5 侨劃 堎ㅂㅅ⇑4+K N3. k e NM嗷侨┆ 嗂劃匿窟 / 3 侨劃╥ pF截堎ㅂㅅ / 3k e NM嗷侨┍ 嗂劃匿窟 1 侨⇑ 矜尅伉丁掂嫳 1 侨丁璋∋ 宾孔崀 垠劃兢夕掂妒諂 F BK RV 嗀剃$^{\text{ㅈ/[}}$寀啌哼劃▥ 她壩一⊡凌挑媦劃 冔帆咘壘巡堎⇑ ╥ pF截 / 3 跚ザ劃嗷吵┣ 嗂劃愴窟 0 侨劃勗 埆刻奇堎ㅂㅅ 43. 跚ザ暨啾鹵搔徥暩劃㉯噎嵳截堎ㅂㅅ / . . 跚ザ劃 嗷吵┣ 嗂劃愴窟 1 侨劃咽㈜伶哖ゥ丁出寔戡娲嚓ㅂㅅ⇑ 伉矜尅 ь 掂咱挽傚偳摽偸同鹵憢ヨ╗ 妒諂劃$^{\text{ㅎㅁ}}$璋家哖兢┓ 呜帡⇑ 矜 尅 ┆ 孔崀垠┤ 冔侚劃夼剋媦偯劃0 侨nm丁掂⇑ 伉后┤ 儭任噤 夔慮婺┤ 噔咕匀kΩ甍┆ 嘏她兢$^{\text{ㅎㅁ}}$失劃兢┘ 矜尅屜$^{\text{ㅎㅈ}}$╗ @DK +7. 吟喚劃怎吟喚 ㅇㅇ匡仭┤ 掀嗯她怙傝 ← 儭任 ← へ怙傝丁寔匿⇑ 伉儭任掀嗯劃 矜尅儲影冗二 F BK RV 丁 4K N ▼ 偨ダ囆掃剌刜来峭$^{\text{ㅇㅇ[}}$⇑ F BK RV nA▼ 慄慮└ pF截媲╚ 兢└ ┘ 喓pF截慶㉯戢家ℓ兢兟 勸吣 BL? 她冽励咾偨ダ婷伝奫来峭⇑

傚┘ (ㅂ)偕岨奚偕傻咾怜劃こ勿嗓兑来峭シ$^{\text{ㅎㅈ}}$ F BK RV 嗀 刜呖┆ ┤ 儭侧她匼劼劃臹崀慄慮匿寍妒諂丁ゲ乙她史匿刜勿 墠咾偳墇⇑ 密└ 矜尅 ├ 垹彙回▼ 懇シ K RV 冢惀她岧嗀刜劃 傚岧ㅠ崀嗓兑她矜尅密└ ╥ pF截徼吁蠢虢密└ E +AQD(有)揓唚 μF× 丁出┼ ┘ 戰揓唚μF× ▼ 揯捨 K RV 冢惀她奶来峭一傀⇑ 嗔俠劃关冗二憖冶她嗒mmㅂㅅ▼ 懇シ ㅛ夔冢惀她剌处丁Ꮆkgmm 暨AGL T暩⇑ 伉慷婊剝儿┐ 劃密矜尅冗╗ ┣ 婊坼伉她嗒mm巡劃 俏捰墻(ㄹ)伪劃(有)婧寀垿岦 / 匼勷ㅂㅅ丁元嚏怢μF墳劃(有) 3+F R1 $^{\text{ㅎㅈ}}$⊡匼勷ㅂㅅ⇑ 慷╥ 坼伉她嗒mm巡nA揯捨 AGL T劃 │ 扁一傀矜 尅她夼嶚兢阼撣巡堜 II │ 刜⇑ 嗔俠劃 ├ 垹她嚶μℓ× 壘丁傻回 娼ㅛㅂnA▼ 揯捨 F BK RV 怙傝她 ? I Ꮆ劃兢咕ㄴㄷ┘ 寔匿噪兑她 nF へ⇑ 嗔俠劃关阼 I ╥ pF截匜吁▼ 寔匿噪兑傍┳ 来峭她偨后刜⇑ 俏哖侚吟μℓ墠劃╥ pF截nA揯捨 F BK RV 嗀刜劃 〕俏撓 撢勲ㄹㄱ ← 孔崀垠丁$^{\text{ㅈ¯}}$崌垠$^{\text{ㅇ1[}}$⇑ E +AQD伉揯捨ㅛ夔冢惀她撓撢 勲ㄹㄱ┤ $^{\text{ㅁㅁ}}$午妻扇徥× 壘劃慷呱宫呖冒慼冗俬nm寍ㅛ夔她┳ 徥 ㉯伶$^{\text{ㅇ2[}}$⇑

3 结论

剖屩禲┻ 劃矜尅呱凵丁墇┤ 扇悁彊丁奶来峭一傀失劃壘 / 严峡安来峭噤夔劃埘nm彙ゲ抩ㅂㅅ丁揓唚μF× ⇑ 矜尅伉阼 I 夙徥噤夔nm 0 侨ピ丹侜劃掫nm刱侜ㅛ夔⇑ 夊侨nm劃▥ 丁墇╗ ∋ 宾孔崀垠劃壘侧ㅂㅅ扉她╥ pF截噤夔劃兢壘僕懹敓戲ㅂㅅ丁圍 丁她按夼ㅂㅅ傚失噤夔⇑ 矜尅刱侜兢屜$^{\text{ㅎㅈ}}$掫nm她勍咕ㅛ夔log咱劃 噔咕◑ ⊡吳呜她┓ 嵑└ ● ⇑

患者同意声明

× 尅怦吳▥ ◆ 儲毘澤勍咕憵冶她矜尅ℓ劂‖ ⇑ 伉彙唚┤ 劃 矜尅儲寀ℓ劂▥ -俑-▥ ◆ 她佤ˇ 丁ナ▥ 伉咱歹┐ 匀kΩ她┳ 六 ざ刻⇑ 矜尅吳奶▥ ◆ 她俐fm丁俐fm揳偉嗶┓ ♂影チ冗劃兢倚 僥呱侧ㄴㅅ弋掣庫▥ ◆ 她恻◢ 劃 ♩┓ 崀こ忄(ㅇ)fm⇑

财政支持和赞助

吳

利益冲突

噔咕└ 妍ラ媚

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